

Mr. J. H. Swailes, Director
U.S. Department of Energy
West Valley Demonstration Project
10282 Rock Springs Road
West Valley, New York 14171-9799

AC-EA
WD:2005:0319
October 7, 2005

ATTENTION: M. N. Maloney

Dear Mr. Swailes:

SUBJECT: Revised Draft Resource Conservation and Recovery Act (RCRA) (1976) Part A Permit Application (West Valley Demonstration Project [WVDP] EPA ID#NYD980779540)

REFERENCE: 1) Letter, S. Hammond, P.E. to R.F. Warther, "West Valley Demonstration Project, 6 NYCRR 373 Part B Permit Application", dated February 3, 2005

2) Letter MNM:93969 – 452.3 (DW:2005:0098). J. H. Swailes to S. Hammond, "Response to NYSDEC Comments to West Valley Demonstration Project 6 NYCRR §373-2 Hazardous Waste Application; USEPA ID#NYD980779540", dated April 18, 2005

West Valley Nuclear Services Company (WVNSCO) has prepared this revised draft of the RCRA Part A Permit application (Revision 4) in response to the New York State Department of Environmental Conservation's (NYSDEC's) request for a revision of the RCRA Part A permit application "...to include a storage code under the Integrated Radioactive Waste Treatment System" (Reference 1). This draft permit application also incorporates the revisions identified by the U.S. Department of Energy (DOE) in their April 18, 2005 response letter to NYSDEC (Reference 2), as well as DOE's comments received to date. Changes of note are the incorporation of the Supernatant Treatment System with tank 8D-1, identification of the Liquid Waste Treatment System for tank storage and treatment, and identification of the Cement Solidification System as tank treatment.

WVNSCO had previously modified the permit application to identify the Vitrification Cell and the High-Level Waste Interim Storage (HLWIS) Facility as containment buildings, as well as container storage units. In identifying these two units as containment buildings, along with the Remote-Handled Waste Facility (RHWF), the treatment and storage capacities for the Vitrification Cell and the HLWIS Facility were calculated and added into the existing capacity identified for the RHWF in Section XII of the June 2001 permit application. In addition, Section XIV of the June 2001 permit application was revised to incorporate the additional annual quantity of (mixed) waste to be generated by the operation of these units as containment buildings. It is worth noting that the increases in the containment building capacities identified above are less than 25% of the respective, existing permitted capacities, and thereby do not trigger Commissioner approval pursuant to Title 6 of the Official Compilation of Codes, Rules, and Regulations of the State of New York (6 NYCRR) §373-1.7(d)(12)(i). Because container storage is ongoing in the HLWIS Facility and may be performed in the RHWF and the Vitrification Cell, these units have been assigned with the container storage process code. By identifying these containment buildings

as container storage units, the storage capacity for container storage units has been increased by 385,795 gallons for inclusion of the RHWF (by the addition of the container storage code for the RHWF). Commissioner approval pursuant to 6 NYCRR §373-1.7(d)(5)(i) is not required for the increase in the number of container storage units (14 to 17) or the increase in total capacity because the respective increases are less than 25% of the previous capacities.

Enclosed for your use is Attachment A, a draft proposed letter to NYSDEC; Attachment B, is the draft revision of the RCRA Part A Permit application for the WVDP; Attachment C, is the signed regulatory certification forms; and Attachment D, is the proposed letter to NYSERDA. DOE has committed to providing the draft revision of the Part A Permit to NYSERDA by October 17, 2005 and to NYSDEC, contingent upon the timely resolution of any issue/comments and execution of the certification statement by all parties to the application, by the end of November.

If you have any questions concerning the enclosed, please contact me at extension 2091.

Very truly yours,

WEST VALLEY NUCLEAR SERVICES CO.

Signature on File in Records

William M. Wierzbicki, Manager
Environmental Affairs

WMW:DPK:bnm

Enclosures: A. Proposed Letter of Transmittal to NYSDEC
 B. Draft Revision of the RCRA Part A Permit Application for the WVDP
 C. West Valley Nuclear Services Company Certification
 D. Proposed Letter of Transmittal to NYSERDA

ATTACHMENT A

PROPOSED LETTER OF TRANSMITTAL TO NYSDEC

Proposed Letter of Transmittal

Mr. Robert J. Phaneuf, P.E.
Chief, Hazardous Waste Engineering Western Section
Division of Solid and Hazardous Materials
New York State Department of Environmental Conservation
625 Broadway, 8th Floor
Albany, New York 12233-7250

SUBJECT: Revised Resource Conservation and Recovery Act (RCRA) (1976) Part A Permit Application (West Valley Demonstration Project [WVDP] EPA ID#NYD980779540)

REFERENCE: 1) Letter, S. Hammond, P.E. to R.F. Warther, "West Valley Demonstration Project, 6 NYCRR 373 Part B Permit Application", dated February 3, 2005.

2) Letter MNM:93969 – 452.3 (DW:2005:0098), J. H. Swailes to S. Hammond, "Response to NYSDEC Comments to West Valley Demonstration Project 6 NYCRR §373-2 Hazardous Waste Application; USEPA ID#NYD980779540", dated April 18, 2005.

Dear Mr. Phaneuf:

The Department of Energy (DOE) has enclosed a revised RCRA Part A Permit application for the WVDP pursuant to the New York State Department of Environmental Conservation's (NYSDEC's) letter dated February 3, 2005 (Reference 1). Specifically, this permit revision was prepared to include NYSDEC's request for a revision of the RCRA Part A permit application "...to include a storage code under the Integrated Radioactive Waste Treatment System (IRTS)." DOE subsequently transmitted a letter dated April 18, 2005, to NYSDEC outlining the additional revisions that would be incorporated into the revised permit application (Reference 2). The following changes to the RCRA Part A Permit application were identified in DOE's April 18, 2005 letter:

- update New York State Energy Research and Development Authority's (NYSERDA's) corporate address;
- update WVDP environmental permits;
- revise the IRTS, which consists of the Supernatant Treatment System (STS), Liquid Waste Treatment System (LWTS), and Cement Solidification System (CSS), from one to three individual tank treatment units (note: STS is now included with 8D-1 tank treatment unit);
- revise the Vitrification Facility, which consists of the Vitrification Cell, High-Level Waste Interim Storage (HLWIS) Facility, and Analytical & Process Chemistry (A&PC) Hot Cells, from one to three individual container storage units
- revise Attachment B, Section XI, RCRA Unit Summary;
- revise Figures/Drawings presented in Attachments C and D; and
- revise site photographs and/or aerial photographs in Attachment E.

Upon review of the future activities anticipated to be performed at the WVDP, DOE has determined that additional containment building treatment and storage activities would provide for greater flexibility

during decontamination and decommissioning (D&D) activities. Therefore, the Vitrification Cell and HLWIS Facility have been identified with containment building storage and treatment codes in this permit application. Using these units as containment buildings would provide for greater flexibility and efficiency in managing high-activity mixed waste generated within the Process Building, as a result of D&D activities.

The specific changes made in this revised RCRA Part A Permit Application include the following:

A. Administrative Changes

- U.S. Environmental Protection Agency (EPA) RCRA Subtitle C Site Identification and Hazardous Waste Permit Information Form (EPA Form 8700-23, Rev. March 2005) was used, as provided by NYSDEC, to prepare this permit application.
- Page 2 of 3, line 9 and page 1 of 6, line 4, respectively, of the RCRA Subtitle C Site Identification Form and Hazardous Waste Permit Information Form. Incorporates the update of NYSERDA's corporate address.
- Page 6 of 6, line 11 of the Hazardous Waste Permit Information Form. The following figure have been incorporated into the permit application to comply with regulatory requirements:
 - a topographic map (Figure A-1) depicting the Western New York Nuclear Service Center, WVDP, injection wells, surface water bodies, and drinking water wells within 0.25 miles of the site;
 - a site map (Figure A-2) of the WVDP depicting the interim status treatment and storage units and surface water bodies; and
 - a site map (Figure A-3) identifying intake and discharge structures, monitoring wells, springs, and surface water bodies.
- Page 6 of 6, line 12, of the Hazardous Waste Permit Information Form. A current facility drawing of the WVDP (11 inch by 17 inch) that replicates Figure A-2 is provided.
- Page 6 of 6, line 13, of the Hazardous Waste Permit Information Form. Photographs showing low aerial or ground level views of the current interim status storage and treatment units are provided.

B. Technical Changes

- Page 3 of 6, line 8 of the Hazardous Waste Permit Information Form has been revised to include the following information:
 - the total container storage (S01) capacity has been increased from 3,975,785 gallons to 4,361,580 gallons to account for inclusion of the Remote-Handled Waste Facility (RHWF) containment building and the increase in the number of units, as described below.

- the total number of container storage units has increased to 17. In the previous permit application, the Vittrification Facility was identified as a container storage unit (S01). The Vittrification Facility consisted of the Vittrification Cell, the HLWIS Facility, and the A&PC Hot Cells, which individually were included in the total capacity presented. In this application, the Vittrification Facility is only identified as other treatment (T04); treatment by vittrification. However, the “subparts” of the Vittrification Facility in this application are identified as individual units; therefore, there is a total increase of two units by this breakout. In addition, by including a container storage process code for the RHWF there is a net increase of three in the number of container storage units in this permit application.
 - the total tank storage (S02) capacity has been increased from 1,530,000 gallons to 1,593,570 gallons to account for the addition of 10 LWTS tanks, which includes the tanks requested by NYSDEC. The increase in tank storage capacity is based on the individual tanks utilized in the LWTS.
 - the total number of tank storage (S02) units has been increased from 4 to 14 to account for the addition of 10 LWTS tanks along with previously identified storage tanks 8D-1, 8D-2, 8D-3, and 8D-4.
 - the total containment building storage (S06) and treatment (T94) capacity has been increased from 1,910 cubic yards (yd³) to 2,380 yd³ to account for the increase in the number of units, as described below.
 - the total number of containment buildings (S06) has increased from one to three with the inclusion of the Vittrification Cell and the HLWIS Facility in this permit application.
 - The total number of units identified with a tank treatment (T01) code has increased from 5 to 6 based on the breakout of IRTS (formerly one treatment unit) into its individual components (i.e., STS, LWTS, and CSS). The STS, based on its physical presence in tank 8D-1 is accounted for by the treatment code previously assigned to this tank. Therefore, there is a net increase of one tank treatment unit.
- Page 3 of 6, line 9 of the Hazardous Waste Permit Information Form has been revised to indicate that the total number of interim status units used for treatment in containers and treatment of debris and stabilization or pretreatment of liquid wastes (T04) has increased from 14 to 16 based on the breakout of the Vittrification Facility (only the A&PC Hot Cells is included) and the IRTS into individual units.
 - Page 5 of 6, line 10 of the Hazardous Waste Permit Information Form has been revised to increase the estimated annual quantity of waste processed through the three containment buildings from 216 tons to 260 tons.

The RCRA Unit Summary (Attachment B) has been revised to describe the activities to be performed for the unit changes as outlined above, and the appropriate process codes associated with each unit.

The following table has been prepared to identify each interim status unit, the corresponding process code(s), and the appropriate section in the RCRA Unit Summary that details the past, present, and future activities for each unit. This table can be used as a cross reference for the information presented on page 3 of 6, line 8 of the Hazardous Waste Permit Information Form.

We look forward to a timely review and response by NYSDEC.

Should you have any questions regarding this permit application, please contact Moira Maloney of my staff at (716) 942-4255.

Sincerely,

Mr. J. H. Swailes, Director
West Valley Demonstration Project

Enclosure: Revision 4 of the RCRA Part A Permit Application for the WVDP

cc: P. Concannon, NYSDEC, Region 9, w/enc.
E. Dassatti, NYSDEC, Albany, w/enc.
D. David, NYSDEC, Region 9, w/enc.
S. Doleski, NYSDEC, Region 9, w/enc.
S. Hammond, NYSDEC, Albany, w/enc.
V. Minocha, NYSDEC, Albany, w/enc.
L. Winterberger, NYSDEC, Albany, w/enc.
C.L. Gerwitz, NYSED, w/enc.
J. Reidy, EPA, Region 2, w/enc.
T.J. Jackson, OH/WVDP, w/enc.
R.A. Mellor, WVNSCO, w/enc.

RCRA Part A Permit Application Interim Status Unit Summary

Interim Status Unit Description	S01 Container Storage	S02 Tank Storage	S06 Containment Buildings	T01 Tank Treatment	T94 Treatment in Containment Buildings	T04 Other Treatment			Section Within Attachment B, RCRA Unit Summary
						Pre-Treatment of Liquid Waste	Treatment in Containers	Treatment by Vitrification	
<u>Tanks</u>									Section 1.1 and Section 1.2.
1. 8D-1*		X		X					
2. 8D-2		X		X					
3. 8D-3		X		X					
4. 8D-4		X		X					
<u>Systems</u>									Section 2.0 and Section 3.0.
1. Liquid Waste Treatment System		X		X		X			
2. Cement Solidification System				X			X		
3. Vitrification Treatment System								X	Section 4.0
<u>Container Storage Units</u>									
1. A&PC Hot Cells	X						X		
2. LAG Storage Building	X						X		
3. CPC-WSA	X						X		
4. LAG Storage Addition #1	X						X		
5. LAG Storage Addition #2	X						X		
6. LAG Storage Addition #3	X						X		
7. LAG Storage Addition #4	X						X		
8. Interim Waste Storage Facility	X						X		
9. HWSL #1	X						X		
10. HWSL #2	X						X		
11. HWSL #3	X						X		
12. HWSL #4	X						X		
13. HIC Storage Area	X						X		
14. Contact Size-Reduction Facility	X						X		
<u>Containment Buildings</u>									Section 5.0
1. Remote-Handled Waste Facility	X		X		X				
2. Vitrification Cell	X		X		X				
3. HLWIS Facility	X		X		X				
TOTALS									
Number of Units	17	14**	3	6	3	16	1		

* The STS is primarily located within tank 8D-1, and as ancillary equipment of tank 8D-1, is defined as part of the tank 8D-1 system.

** There are 10 tanks identified as part of the Liquid Waste Treatment System interim status unit for tank storage.

ATTACHMENT B

DRAFT REVISION OF THE RCRA PART A PERMIT APPLICATION

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
RCRA SUBTITLE C SITE IDENTIFICATION
AND
HAZARDOUS WASTE PERMIT INFORMATION FORM
EPA FORM 8700-23 (REV. MARCH 2005)
FOR THE WEST VALLEY DEMONSTRATION PROJECT

EPA ID No. NYD980779540

**WEST VALLEY DEMONSTRATION PROJECT (WVDP)
RCRA PART A PERMIT APPLICATION**

TABLE OF CONTENTS

United States Environmental Protection Agency RCRA Subtitle C Site Identification and Hazardous Waste Permit Information Form (EPA Form 8700-23, rev. March 2005), for the West Valley Demonstration Project

Attachment A.	Section X, Other Environmental Permits and Cooperative Agreement Between the United States Department of Energy and New York State Energy and Research and Development Authority
Attachment B.	Section XI, RCRA Unit Summary
Attachment C.	Section XV, Maps
	Figure A-1 Site Topographic Map
	Figure A-2 Interim Status Treatment and Storage Units
	Figure A-3 Groundwater Wells and Surface Water Features
Attachment D.	Section XVI, Facility Drawing
Attachment E.	Section XVII, Photographs
	Figure E-1 Waste Tank Farm (HLW Tanks 8D-1, 8D-2, 8D-3, and 8D-4, and the STS)
	Figure E-2 Main Plant Building (CSRF, CSS, Vitrification Cell, HLWIS Facility, LWTS, and A&PC Hot Cells)
	Figure E-3 Container Storage (LSB and LSA #1)
	Figure E-4 Container Storage (CPC-WSA, LSA #2 and HWSLs #1-4)
	Figure E-5 LAG Storage Addition #3 (LSA #3)
	Figure E-6 High-Integrity Container (HIC) Storage Area
	Figure E-7 LAG Storage Addition #4 (LSA #4) and Shipping Depot
	Figure E-8 Interim Waste Storage Facility (IWSF)
	Figure E-9 Remote-Handled Waste Facility (RHWF)

SEND COMPLETED FORM TO: The Appropriate State or EPA Regional Office.	United States Environmental Protection Agency RCRA SUBTITLE C SITE IDENTIFICATION FORM		
1. Reason for Submittal (See instructions on page 14.) MARK ALL BOX(ES) THAT APPLY	Reason for Submittal: <input type="checkbox"/> To provide Initial Notification of Regulated Waste Activity (to obtain an EPA ID Number for hazardous waste, universal waste, or used oil activities) <input type="checkbox"/> To provide Subsequent Notification of Regulated Waste Activity (to update site identification information) <input type="checkbox"/> As a component of a First RCRA Hazardous Waste Part A Permit Application <input checked="" type="checkbox"/> As a component of a Revised RCRA Hazardous Waste Part A Permit Application (Amendment # <u>4</u>) <input type="checkbox"/> As a component of the Hazardous Waste Report		
2. Site EPA ID Number (page 15)	EPA ID Number <div style="border: 1px solid black; padding: 2px; display: inline-block;"> N Y D 9 8 0 7 7 9 5 4 0 </div>		
3. Site Name (page 15)	Name: U.S. DEPARTMENT OF ENERGY, WEST VALLEY DEMONSTRATION PROJECT		
4. Site Location Information (page 15)	Street Address: 10282 ROCK SPRINGS ROAD		
	City, Town, or Village: ASHFORD		State: NEW YORK
	County Name: CATTARAUGUS		Zip Code: 14171-9799
5. Site Land Type (page 15)	Site Land Type: <input type="checkbox"/> Private <input type="checkbox"/> County <input type="checkbox"/> District <input type="checkbox"/> Federal <input type="checkbox"/> Indian <input type="checkbox"/> Municipal <input checked="" type="checkbox"/> State <input type="checkbox"/> Other		
6. North American Industry Classification System (NAICS) Code(s) for the Site (page 15)	A. <div style="border: 1px solid black; padding: 2px; display: inline-block;"> 5 4 1 7 1 0 </div>		B. <div style="border: 1px solid black; padding: 2px; display: inline-block;"> </div>
	C. <div style="border: 1px solid black; padding: 2px; display: inline-block;"> </div>		D. <div style="border: 1px solid black; padding: 2px; display: inline-block;"> </div>
7. Site Mailing Address (page 16)	Street or P. O. Box: 10282 ROCK SPRINGS ROAD		
	City, Town, or Village: WEST VALLEY		
	State: NEW YORK		
	Country: U.S.A.		Zip Code: 14171-9799
8. Site Contact Person (page 16)	First Name: MOIRA		MI: N
	Last Name: MALONEY		
9. Operator and Legal Owner of the Site (pages 16 and 17)	A. Name of Site's Operator: U.S. DEPARTMENT OF ENERGY		Date Became Operator (mm/dd/yyyy): 10/01/1980
	Operator Type: <input type="checkbox"/> Private <input type="checkbox"/> County <input type="checkbox"/> District <input checked="" type="checkbox"/> Federal <input type="checkbox"/> Indian <input type="checkbox"/> Municipal <input type="checkbox"/> State <input type="checkbox"/> Other		
	B. Name of Site's Legal Owner: N.Y. STATE ENERGY RESEARCH & DEVELOPMENT AUTHORITY		Date Became Owner (mm/dd/yyyy): 06/15/1961
	Owner Type: <input type="checkbox"/> Private <input type="checkbox"/> County <input type="checkbox"/> District <input type="checkbox"/> Federal <input type="checkbox"/> Indian <input type="checkbox"/> Municipal <input checked="" type="checkbox"/> State <input type="checkbox"/> Other		

EPA ID NO: N Y D 9 8 0 7 7 9 5 4 0

OMB#: 2050-0034 Expires 11/30/2005

9. Legal Owner (Continued) Address	Street or P. O. Box: 17 COLUMBIA CIRCLE	
	City, Town, or Village: ALBANY	
	State: NEW YORK	
	Country: U.S.A.	Zip Code: 12203-6399

10. Type of Regulated Waste Activity

Mark "Yes" or "No" for all activities; complete any additional boxes as instructed. (See instructions on pages 18 to 21.)

A. Hazardous Waste Activities

Complete all parts for 1 through 6.

Y ☒ N ☐ 1. Generator of Hazardous Waste

If "Yes", choose only one of the following - a, b, or c.

☒ a. LQG: Greater than 1,000 kg/mo (2,200 lbs./mo.)
of non-acute hazardous waste; or☐ b. SQG: 100 to 1,000 kg/mo (220 - 2,200 lbs./mo.)
of non-acute hazardous waste; or☐ c. CESQG: Less than 100 kg/mo (220 lbs./mo.)
of non-acute hazardous waste

In addition, indicate other generator activities.

Y ☐ N ☒ d. United States Importer of Hazardous WasteY ☒ N ☐ e. Mixed Waste (hazardous and radioactive) GeneratorY ☐ N ☒ 2. Transporter of Hazardous WasteY ☒ N ☐ 3. Treater, Storer, or Disposer ofHazardous Waste (at your site) Note:
A hazardous waste permit is required for
this activity.Y ☐ N ☒ 4. Recycler of Hazardous Waste (at your
site)Y ☐ N ☒ 5. Exempt Boiler and/or Industrial
Furnace

If "Yes", mark each that applies.

☐ a. Small Quantity On-site Burner
Exemption☐ b. Smelting, Melting, and Refining
Furnace ExemptionY ☐ N ☒ 6. Underground Injection Control

B. Universal Waste Activities

Y ☐ N ☒ 1. Large Quantity Handler of Universal Waste (accumulate
5,000 kg or more) [refer to your State regulations to
determine what is regulated]. Indicate types of universal
waste generated and/or accumulated at your site. If "Yes",
mark all boxes that apply:

	Generate	Accumulate
a. Batteries	<input type="checkbox"/>	<input type="checkbox"/>
b. Pesticides	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Thermostats	<input type="checkbox"/>	<input type="checkbox"/>
d. Lamps	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. Other (specify) _____	<input type="checkbox"/>	<input type="checkbox"/>
f. Other (specify) _____	<input type="checkbox"/>	<input type="checkbox"/>
g. Other (specify) _____	<input type="checkbox"/>	<input type="checkbox"/>

Y ☐ N ☒ 2. Destination Facility for Universal Waste

Note: A hazardous waste permit may be required for this activity.

C. Used Oil Activities

Mark all boxes that apply.

Y ☐ N ☒ 1. Used Oil Transporter

If "Yes", mark each that applies.

☐ a. Transporter
☐ b. Transfer FacilityY ☐ N ☒ 2. Used Oil Processor and/or Re-refiner

If "Yes", mark each that applies.

☐ a. Processor
☐ b. Re-refinerY ☐ N ☒ 3. Off-Specification Used Oil BurnerY ☒ N ☐ 4. Used Oil Fuel Marketer

If "Yes", mark each that applies.

☐ a. Marketer Who Directs Shipment of
Off-Specification Used Oil to
Off-Specification Used Oil Burner
☐ b. Marketer Who First Claims the
Used Oil Meets the Specifications

EPA ID NO: | N | Y | D | | 9 | 8 | 0 | | 7 | 7 | 9 | | 5 | 4 | 0 |

OMB#: 2050-0034 Expires 11/30/2005

11. Description of Hazardous Wastes (See Instructions on page 22.)

A. Waste Codes for Federally Regulated Hazardous Wastes. Please list the waste codes of the Federal hazardous wastes handled at your site. List them in the order they are presented in the regulations (e.g., D001, D003, F007, U112). Use an additional page if more spaces are needed.

D001	D002	D003	D004	D005	D006	D007
D008	D009	D010	D011	D012	D013	D018
D019	D021	D022	D027	D028	D029	D030

B. Waste Codes for State-Regulated (i.e., non-Federal) Hazardous Wastes. Please list the waste codes of the State-regulated hazardous wastes handled at your site. List them in the order they are presented in the regulations. Use an additional page if more spaces are needed for waste codes.

B002	B003	B005	B007			

12. Comments (See Instructions on page 22.)

Items 11A and 11B comprise a comprehensive list of hazardous waste codes for those hazardous wastes managed at the WWD to date. Additional hazardous waste may be managed at the facility. For a complete list of hazardous waste codes that can be managed by the facility, please refer to the hazardous waste Permit Information Form included with this Site Identification Form.

13. Certification. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. For the RCRA Hazardous Waste Part A Permit Application, all operator(s) and owner(s) must sign (see 40 CFR 270.10 (b) and 270.11). (See Instructions on page 22.)

Signature of operator, owner, or an authorized representative	Name and Official Title (type or print)	Date Signed (mm/dd/yyyy)
	(see page 3d)	

EPA ID NO: N Y D 9 8 0 7 7 9 5 4 0

OMB#: 2050-0034 Expires 11/30/2005

11. Description of Hazardous Wastes (See instructions on page 22.) (Continued)

A. Waste Codes for Federally Regulated Hazardous Wastes. Please list the waste codes of the Federal hazardous wastes handled at your site. List them in the order they are presented in the regulations (e.g., D001, D003, F007, U112). Use an additional page if more spaces are needed.

P119	U002	U019	U028	U044	U057	U071
U072	U076	U080	U123	U133	U151	U154
U159	U160	U161	U162	U165	U196	U204

B. Waste Codes for State-Regulated (i.e., non-Federal) Hazardous Wastes. Please list the waste codes of the State-regulated hazardous wastes handled at your site. List them in the order they are presented in the regulations. Use an additional page if more spaces are needed for waste codes.

12. Comments (See instructions on page 22.)

13. Certification. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. For the RCRA Hazardous Waste Part A Permit Application, all operator(s) and owner(s) must sign (see 40 CFR 270.10 (b) and 270.11). (See instructions on page 22.)

Signature of operator, owner, or an authorized representative	Name and Official Title (type or print)	Date Signed (mm/dd/yyyy)
	(see page 3d)	

EPA ID NO: N Y D 9 8 0 7 7 9 5 4 0

OMB#: 2050-0034 Expires 11/30/2005

11. Description of Hazardous Wastes (See instructions on page 22.) (Continued)						
A. Waste Codes for Federally Regulated Hazardous Wastes. Please list the waste codes of the Federal hazardous wastes handled at your site. List them in the order they are presented in the regulations (e.g., D001, D003, F007, U112). Use an additional page if more spaces are needed.						
U220	U226	U239	U359			
B. Waste Codes for State-Regulated (i.e., non-Federal) Hazardous Wastes. Please list the waste codes of the State-regulated hazardous wastes handled at your site. List them in the order they are presented in the regulations. Use an additional page if more spaces are needed for waste codes.						
12. Comments (See instructions on page 22.)						
13. Certification. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. For the RCRA Hazardous Waste Part A Permit Application, all operator(s) and owner(s) must sign (see 40 CFR 270.10 (b) and 270.11). (See instructions on page 22.)						
Signature of operator, owner, or an authorized representative	Name and Official Title (type or print)				Date Signed (mm/dd/yyyy)	
	John H. Swailes, Director, DOE-EH/WWDP (site operator)*					
	Russell A. Mellor, President, WVNSCO (site co-operator)*					
	Peter R. Smith, President, NYSERDA (site owner)*					

**PART A Permit Application
FOOTNOTE**

* Footnote to (13) page 3c of RCRA *Subtitle C Site Identification Form*

The U.S. Department of Energy (DOE) and its management and operating contractor, West Valley Nuclear Services Company, LLC (WVNSCO), have jointly signed this application as co-operators of the authorized interim status facility. The DOE has determined that dual signatures best reflect the actual apportionment of responsibility for implementing RCRA under which the DOE operates facilities under its jurisdiction or control. The DOE's responsibilities include policy, programmatic, funding, and scheduling decisions, as well as general oversight. The contractor's responsibilities are for day-to-day activities in accordance and consistent with the DOE Contract and DOE Directives and Orders, and implementing RCRA compliance, such as waste analyses and handling, monitoring, recordkeeping, and contingency planning.

The New York State Energy Research and Development Authority (NYSERDA) has signed this application as holder of record title, on behalf of the State of New York, to the Western New York Nuclear Service Center (Center). The DOE, and consequently its management and operating contractor, have certain rights, authorities, duties, and responsibilities for certain wastes, facilities, and premises located at the Center, as defined in the West Valley Demonstration Project Act (WVDP Act), Publ. L. 96-368, 42 USC 2021a, as implemented by the Cooperative Agreement, effective October 1, 1980, as amended September 18, 1981, is appended to this application. A copy of the WVDP Act is included as Attachment G of the Cooperative Agreement. Submission of this permit application is not intended to affect the respective interests of the DOE and NYSERDA under the WVDP Act as implemented by the Cooperative Agreement.

EPA ID NO: N Y D 9 8 0 7 7 9 5 4 0

OMB #: 2050-0034 Expires 11/30/2005

United States Environmental Protection Agency
HAZARDOUS WASTE PERMIT INFORMATION FORM

1. Facility Permit Contact (See instructions on page 23)	First Name: MOIRA	MI: N	Last Name: MALONEY
	Phone Number: (716) 942-4255		Phone Number Extension: NA
2. Facility Permit Contact Mailing Address (See instructions on page 23)	Street or P.O. Box: 10282 ROCK SPRINGS ROAD		
	City, Town, or Village: WEST VALLEY		
	State: NEW YORK		
	Country: U.S.A.		Zip Code: 14171-9799
3. Operator Mailing Address and Telephone Number (See instructions on page 23)	Street or P.O. Box: 10282 ROCK SPRINGS ROAD		
	City, Town, or Village: WEST VALLEY		
	State: NEW YORK		
	Country: U.S.A.	Zip Code: 14171-9799	Phone Number: (716) 942-4312
4. Legal Owner Mailing Address and Telephone Number (See instructions on page 23)	Street or P.O. Box: 17 COLUMBIA CIRCLE		
	City, Town, or Village: ALBANY		
	State: NEW YORK		
	Country: U.S.A.	Zip Code: 12203-6399	Phone Number: (518) 862-1090
5. Facility Existence Date (See instructions on page 24)	Facility Existence Date (mm/dd/yyyy): February 22, 1982		
6. Other Environmental Permits (See instructions on page 24)			
A. Permit Type (Enter code)	B. Permit Number	C. Description	
		(See Attachment A - Environmental Permits)	
7. Nature of Business (Provide a brief description; see instructions on page 24)			
<p>PURPOSE: Under the West Valley Demonstration Project Act (WVDP), the U.S. Department of Energy is required to carry out a high-level radioactive waste (HLW) management project to demonstrate solidification techniques which can be used for preparing HLW for disposal. ACTIVITIES: (a) solidify HLW in a form suitable for transport and disposal by vitrification or such other technology which DOE determines to be most effective, (b) develop containers for suitable transport of HLW, (c) transport solidified waste to an appropriate federal repository, (d) dispose of low-level radioactive waste (LLW) and transuranic waste (TRU) per applicable licensing requirements, and (e) decontaminate and decommission (D&D) all tanks, facilities, material, and hardware used in conjunction with the Project.</p> <p style="text-align: center;">Please refer to the attached "RCRA Unit Summary" for details regarding the units to be permitted under RCRA.</p>			

8. Process Codes and Design Capacities (See Instructions on page 24) - Enter information in the Sections on Form Page 3.

A. PROCESS CODE - Enter the code from the list of process codes in the table below that best describes each process to be used at the facility. Fifteen lines are provided for entering codes. If more lines are needed, attach a separate sheet of paper with the additional information. For "other" processes (i.e., D99, S99, T04 and X99), enter the process information in item 9 (including a description).

B. PROCESS DESIGN CAPACITY - For each code entered in Section A, enter the capacity of the process.

1. AMOUNT - Enter the amount. In a case where design capacity is not applicable (such as in a closure/post-closure or enforcement action) enter the total amount of waste for that process.

2. UNIT OF MEASURE - For each amount entered in Section B(1), enter the code in Section B(2) from the list of unit of measure codes below that describes the unit of measure used. Select only from the units of measure in this list.

C. PROCESS TOTAL NUMBER OF UNITS - Enter the total number of units for each corresponding process code.

PROCESS CODE	PROCESS	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY	PROCESS CODE	PROCESS	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
D79	<u>Disposal:</u> Underground Injection Well Disposal	Gallons; Liters; Gallons Per Day; or Liters Per Day	T81	<u>Treatment (continued):</u> Cement Kiln	For T81-T94:
D80	Landfill	Acres-feet; Hectare-meter; Acres; Cubic Meters; Hectares; Cubic Yards	T82	Lime Kiln	
D81	Land Treatment	Acres or Hectares	T83	Aggregate Kiln	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Metric Tons Per Hour; Short Tons Per Day; Btu Per Hour; or Million Btu Per Hour
D82	Ocean Disposal	Gallons Per Day or Liters Per Day	T84	Phosphate Kiln	
D83	Surface Impoundment Disposal	Gallons; Liters; Cubic Meters; or Cubic Yards	T85	Coke Oven	
D99	Other Disposal	Any Unit of Measure in Code Table Below	T86	Blast Furnace	
S01	<u>Storage:</u> Container	Gallons; Liters; Cubic Meters; or Cubic Yards	T87	Smelting, Melting, or Refining Furnace	
S02	Tank Storage	Gallons; Liters; Cubic Meters; or Cubic Yards	T88	Titanium Dioxide Chloride Oxidation Reactor	
S03	Waste Pile	Cubic Yards or Cubic Meters	T89	Methane Reforming Furnace	
S04	Surface Impoundment Storage	Gallons; Liters; Cubic Meters; or Cubic Yards	T90	Pulping Liquor Recovery Furnace	
S05	Drip Pad	Gallons; Liters; Acres; Cubic Meters; Hectares; or Cubic Yards	T91	Combustion Device Used in The Recovery Of Sulfur Values From Spent Sulfuric Acid	
S06	Containment Building Storage	Cubic Yards or Cubic Meters	T92	Halogen Acid Furnaces	
S99	Other Storage	Any Unit of Measure in Code Table Below	T93	Other Industrial Furnaces Listed in 40 CFR §260.10	
T01	<u>Treatment:</u> Tank Treatment	Gallons Per Day; Liters Per Day	T94	Containment Building - Treatment	Cubic Yards; Cubic Meters; Short Tons Per Hour; Gallons Per Hour; Liters Per Hour; Btu Per Hour; Pounds Per Hour; Short Tons Per Day; Kilograms Per Hour; Metric Tons Per Day; Gallons Per Day; Liters Per Day; Metric Tons Per Hour; or Million Btu Per Hour
T02	Surface Impoundment Treatment	Gallons Per Day; Liters Per Day	X01	<u>Miscellaneous (Subpart X):</u> Open Burning/Open Detonation	Any Unit of Measure in Code Table Below
T03	Incinerator	Short Tons Per Hour; Metric Tons Per Hour; Gallons Per Hour; Liters Per Hour; Btu Per Hour; Pounds Per Hour; Short Tons Per Day; Kilograms Per Hour; Gallons Per Day; Liters Per Day; Metric Tons Per Hour; or Million Btu Per Hour	X02	Mechanical Processing	Short Tons Per Hour; Metric Tons Per Hour; Short Tons Per Day; Metric Tons Per Day; Pounds Per Hour; Kilograms Per Hour; Gallons Per Hour; Liters Per Hour; or Gallons Per Day
T04	Other Treatment	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Metric Tons Per Hour; Short Tons Per Day; Btu Per Hour; Gallons Per Day; Liters Per Hour; or Million Btu Per Hour	X03	Thermal Unit	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Metric Tons Per Hour; Short Tons Per Day; Btu Per Hour; or Million Btu Per Hour
T99	Boiler	Gallons; Liters; Gallons Per Hour; Liters Per Hour; Btu Per Hour; or Million Btu Per Hour	X04	Geologic Repository	Cubic Yards; Cubic Meters; Acres-feet; Hectare-meter; Gallons; or Liters
			X99	Other Subpart X	Any Unit of Measure Listed Below

UNIT OF MEASURE	UNIT OF MEASURE CODE	UNIT OF MEASURE	UNIT OF MEASURE CODE	UNIT OF MEASURE	UNIT OF MEASURE CODE
Gallons.....	G	Short Tons Per Hour.....	D	Cubic Yards.....	Y
Gallons Per Hour.....	E	Metric Tons Per Hour.....	W	Cubic Meters.....	C
Gallons Per Day.....	U	Short Tons Per Day.....	N	Acres.....	B
Liters.....	L	Metric Tons Per Day.....	S	Acres-feet.....	A
Liters Per Hour.....	H	Pounds Per Hour.....	J	Hectares.....	Q
Liters Per Day.....	V	Kilograms Per Hour.....	R	Hectare-meter.....	F
		Million Btu Per Hour.....	X	Btu Per Hour.....	I

EPA ID NO: | N | Y | D | | 9 | 8 | 0 | | 7 | 7 | 9 | | 5 | 4 | 0 |

OMB #: 2050-0034 Expires 11/30/2005

8. Process Codes and Design Capacities (Continued)											
EXAMPLE FOR COMPLETING Item 8 (shown in line number X-1 below): A facility has a storage tank, which can hold 533,788 gallons.											
Line Number	A. Process Code (From list above)				B. PROCESS DESIGN CAPACITY		C. Process Total Number of Units	For Official Use Only			
					(1) Amount (Specify)	(2) Unit of Measure (Enter code)					
X 1	S	0	2		5 3 3 . 7 8 8	G	0 0 1				
1	S	0	1		4,361,580.000	G	0 1 7				
2	S	0	2		1,593,570.000	G	0 1 4				
3	S	0	6		2,380.000	Y	0 0 3				
4	T	9	4		(Included with S06)	Y	0 0 3				
5	T	0	1		1,700.000	U	0 0 6				
6											
7											
8											
9											
1 0											
1 1											
1 2											
1 3											
1 4											
1 5											

NOTE: If you need to list more than 15 process codes, attach an additional sheet(s) with the information in the same format as above. Number the lines sequentially, taking into account any lines that will be used for "other" processes (i.e., D99, S99, T04 and X99) in Item 9.

9. Other Processes (See instructions on page 25 and follow instructions from Item 8 for D99, S99, T04 and X99 process codes)											
Line Number (Enter as in sequence with Item 8)	A. Process Code (From list above)				B. PROCESS DESIGN CAPACITY		C. Process Total Number of Units	D. Description of Process			
					(1) Amount (Specify)	(2) Unit of Measure (Enter code)					
X 2	T	0	4		1 0 0 . 0 0 0	U	0 0 1	In-situ Vitrification			
	T	0	4		60.000	U	0 0 1	High-Level Waste Vitrification (See RCRA Unit Summary Section 5.0.)			
	T	0	4		1,000.000	U	0 1 6	Treatment in containers and treatment of debris and stabilization or pretreatment of liquid wastes. (See RCRA Unit Summary Sections 4.0 and 6.0.)			

10. Description of Hazardous Wastes (See Instructions on page 25) - Enter Information in the Sections on Form Page 5.

- A. EPA HAZARDOUS WASTE NUMBER** - Enter the four-digit number from 40 CFR, Part 261 Subpart D of each listed hazardous waste you will handle. For hazardous wastes which are not listed in 40 CFR, Part 261 Subpart D, enter the four-digit number(s) from 40 CFR Part 261, Subpart C that describes the characteristics and/or the toxic contaminants of those hazardous wastes.
- B. ESTIMATED ANNUAL QUANTITY** - For each listed waste entered in Section A, estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in Section A, estimate the total annual quantity of all the non-listed waste(s) that will be handled which possess that characteristic or contaminant.
- C. UNIT OF MEASURE** - For each quantity entered in Section B, enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS	P	KILOGRAMS	K
TONS	T	METRIC TONS	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure, taking into account the appropriate density or specific gravity of the waste.

D. PROCESSES**1. PROCESS CODES:**

For listed hazardous waste: For each listed hazardous waste entered in Section A, select the code(s) from the list of process codes contained in Items 8A and 9A on page 3 to indicate all the processes that will be used to store, treat, and/or dispose of all the listed hazardous wastes.

For non-listed hazardous waste: For each characteristic or toxic contaminant entered in Section A, select the code(s) from the list of process codes contained in Items 8A and 9A on page 3 to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed hazardous wastes that possess that characteristic or toxic contaminant.

NOTE: THREE SPACES ARE PROVIDED FOR ENTERING PROCESS CODES. IF MORE ARE NEEDED:

- Enter the first two as described above.
- Enter "000" in the extreme right box of Item 10.D(1).
- Use additional sheet, enter line number from previous sheet, and enter additional code(s) in Item 10.E.

2. PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in Item 10.D(2) or in Item 10.E(2).

NOTE: HAZARDOUS WASTES DESCRIBED BY MORE THAN ONE EPA HAZARDOUS WASTE NUMBER - Hazardous wastes that can be described by more than one EPA Hazardous Waste Number shall be described on the form as follows:

- Select one of the EPA Hazardous Waste Numbers and enter it in Section A. On the same line complete Sections B, C and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
- In Section A of the next line enter the other EPA Hazardous Waste Number that can be used to describe the waste. In Section D(2) on that line enter "Included with above" and make no other entries on that line.
- Repeat step 2 for each EPA Hazardous Waste Number that can be used to describe the hazardous waste.

EXAMPLE FOR COMPLETING Item 10 (shown in line numbers X-1, X-2, X-3, and X-4 below) - A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operations. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

Line Number	A. EPA Hazardous Waste No. (Enter code)	B. Estimated Annual Quantity of Waste	C. Unit of Measure (Enter code)	D. PROCESSES									
				(1) PROCESS CODES (Enter code)								(2) PROCESS DESCRIPTION- (If a code is not entered in D(1))	
X 1	K 0 5 4	900	P	T	0	3	D	8	0				
X 2	D 0 0 2	400	P	T	0	3	D	8	0				
X 3	D 0 0 1	100	P	T	0	3	D	8	0				
X 4	D 0 0 2											Included With Above	

EPA ID NO: | N | Y | D | 9 | 8 | 0 | 7 | 7 | 9 | 5 | 4 | 0 |

OMB #: 2050-0034 Expires 11/30/2005

10. Description of Hazardous Wastes (Continued. Use the Additional Sheet(s) as necessary; number pages as 5 a, etc.)																	
Line Number	A. EPA Hazardous Waste No. (Enter code)				B. Estimated Annual Quantity of Waste	C. Unit of Measure (Enter code)	D. PROCESSES										
							(1) PROCESS CODES (Enter code)								(2) PROCESS DESCRIPTION (If a code is not entered in D(1))		
	1	D	0	0	2	3,042	T	T	0	1	S	0	2	T	0	4	See RCRA Unit Summary Sections 2.0, 3.0, & 4.0
	2	D	0	0	5												Included with above
	3	D	0	0	6												Included with above
	4	D	0	0	7												Included with above
	5	D	0	0	8												Included with above
	6	D	0	0	9												Included with above
	7	D	0	1	0												Included with above
	8	D	0	1	1												Included with above
	9	B	0	0	1	28,219 **	T	S	0	1	T	0	4				See RCRA Unit Summary Section 6.0.
1	0	Through															Included with above
1	1	B	0	0	7	(Inclusive)											Included with above
1	2	D	0	0	1												Included with above
1	3	Through															Included with above
1	4	D	0	4	3	(Inclusive)											Included with above
1	5	F	0	0	1												Included with above
1	6	Through															Included with above
1	7	F	0	3	9	(Inclusive)											Included with above
1	8	P	0	0	1												Included with above
1	9	Through															Included with above
2	0	P	2	0	5	(Inclusive)											Included with above
2	1	U	0	0	1												Included with above
2	2	Through															
2	3	U	4	1	1	(Inclusive)											Included with above
2	4	B	0	0	1	260 **	T	S	0	6	T	9	4				See RCRA Unit Summary Section 7.0
2	5	Through															Included with above
2	6	B	0	0	7	(Inclusive)											Included with above
2	7	D	0	0	1												Included with above
2	8	Through															Included with above
2	9	D	0	4	3	(Inclusive)											Included with above
3	0	F	0	0	1												Included with above
3	1	Through															Included with above
3	2	F	0	3	9	(Inclusive)											Included with above
3	3	P	0	0	1												Included with above
3	4	Through															Included with above
3	5	P	2	0	5	(Inclusive)											Included with above
3	6	U	0	0	1												Included with above
3	7	Through															Included with above
3	8	U	4	1	1	(Inclusive)											Included with above
3	9																Included with above

** Section 10, lines 9 and 24: The estimated annual quantity reflects the total space available and is used for any combination of the identified hazardous waste codes.

ATTACHMENT A
SECTION X
OTHER ENVIRONMENTAL PERMITS AND
COOPERATIVE AGREEMENT BETWEEN
UNITED STATES DEPARTMENT OF ENERGY AND
NEW YORK STATE ENERGY RESEARCH AND DEVELOPMENT
AUTHORITY

Attachment A - Environmental Permits

A. Permit Type (Enter Code)	B. Permit Number	C. Description (including Expiration Dates)
Waste Water Treatment and Discharge		
N	NY0000973	State Pollutant Discharge Elimination System (SPDES) Permit (February 1, 2009)
Air Emissions		
E	9-0422-00005/00099	NYSDEC - Air Facility Registration Certificate (No Expiration Date)
E	Not Numbered	EPA NESHAP - Vitrification Facility HVAC System (No Expiration Date)
E	WVDP-187-01	EPA NESHAP - 01-14 Building Ventilation System (No Expiration Date)
E	WVDP-287-01	EPA NESHAP - Contact Size Reduction Facility (No Expiration Date)
E	WVDP-387-01	EPA NESHAP - Supernatant Treatment System/Permanent Ventilation System (No Expiration Date)
E	WVDP-587-01	EPA NESHAP - Outdoor Ventilation Enclosures (No Expiration Date)
E	WVDP-687-01	EPA NESHAP - Process Building Ventilation System. Revised to include Melter Off-Gas (No Expiration Date)
Bulk Storage Tanks		
E	9-000158	NYSDEC - Chemical Bulk Storage Tank Registration (July 5, 2007)
E	9-008885	NYSDEC - Petroleum Bulk Storage Tank Registration (September 2, 2006)
Other Permits and Licenses		
E	04-05-TR096	Buffalo Pollutant Discharge Elimination System (June 30, 2006)
E	DWP 04-041	New York State Division of Fish and Wildlife - Bird Depredation License (June 30, 2006)
E	MB 747595-0	U.S. Fish and Wildlife Service - Bird Depredation License (June 30, 2006)

Key:

N= NPDES Clean Water Act

E = other relevant environmental permits.

(Conformed Copy)

COOPERATIVE AGREEMENT

between

UNITED STATES DEPARTMENT OF ENERGY

and

NEW YORK STATE
ENERGY RESEARCH AND DEVELOPMENT AUTHORITY

on the

WESTERN NEW YORK NUCLEAR SERVICE CENTER
at WEST VALLEY, NEW YORK

*Effective October 1, 1980
as amended
September 18, 1981*

EXPLANATORY STATEMENT

This is a conformed copy of the Cooperative Agreement, effective October 1, 1980, as amended effective September 18, 1981, between the United States Department of Energy and the New York State Energy Research and Development Authority.

TABLE OF CONTENTS

<u>ARTICLE I</u>	<u>DEFINITIONS</u>	2
Section 1.01.	Definitions.	2
<u>ARTICLE II</u>	<u>PURPOSE, OBJECTIVES AND BENEFITS</u>	6
Section 2.01.	Purpose.	6
Section 2.02.	Objectives.	6
Section 2.03.	Benefits.	7
<u>ARTICLE III</u>	<u>PROJECT MANAGEMENT & RESPONSIBILITIES</u>	8
Section 3.01.	Department Responsibility for the Project	8
Section 3.02.	Specific Department Responsibilities	8
Section 3.03.	Authority Services.	10
Section 3.04.	Standard of Performance; Etc.	11
Section 3.05.	Maintenance and Management of the Solidified Wastes.	11
<u>ARTICLE IV</u>	<u>USE OF THE CENTER</u>	12
Section 4.01.	Possession of Project Premises and Project Facilities.	12
Section 4.02.	Use of the Project Premises, Project Facilities, and Retained Premises.	13
Section 4.03.	Condition on Surrender	13
Section 4.04.	Additional Rights Granted to the Department.	14
Section 4.05.	Rights Retained by the Authority	14
Section 4.06.	Present Condition of Center	15
Section 4.07.	Changes, Alterations, and Additions.	15
Section 4.08.	Operation, Maintenance, and Repair	15
Section 4.09.	Damage or Destruction.	16
Section 4.10.	Responsibility for Project Premises and Facilities.	16
Section 4.11.	Additional Department Services	16
Section 4.12.	Utility and Transportation Services	18
<u>ARTICLE V</u>	<u>COST OF THE PROJECT</u>	19
Section 5.01.	Estimated Cost of the Project	19
Section 5.02.	Cost-Sharing	19

Section 5.03. Accounting for Project Costs	19
Section 5.04. Adjustments	21
<u>ARTICLE VI LICENSING AND COMPLIANCE WITH LAWS</u>	22
Section 6.01. Technical Assistance; Application to the Commission	22
Section 6.02. Licensing	22
Section 6.03. Compliance with Legal Requirements	22
<u>ARTICLE VII INDEMNIFICATION</u>	23
Section 7.01. Indemnification	23
<u>ARTICLE VIII PROJECT PLANS, REPORTS, CONSULTATION, AND COORDINATION</u>	24
Section 8.01. Annual Project Plan and Budget	24
Section 8.02. Consultation and Agreement in Certain Events	25
Section 8.03. Resolution of Disputes as to Project Costs	25
Section 8.04. Consultation and Coordination	26
Section 8.05. Notice and Consultation in Certain Events	27
Section 8.06. Authority's Right of Inspection	27
Section 8.07. Consultation in Contractor Selection and Evaluations	28
Section 8.08. No Limitation on Responsibilities	29
<u>ARTICLE IX ASSIGNMENTS</u>	29
Section 9.01. Assignments	29
<u>ARTICLE X INSURANCE</u>	30
Section 10.01. Price-Anderson Act	30
Section 10.02. Other Insurance	30
<u>ARTICLE XI MISCELLANEOUS</u>	30
Section 11.01. No Waiver	31
Section 11.02. Availability of Funds	31
Section 11.03. General Conditions	31

Section 11.04. Order of Precedence	31
Section 11.05. Counterparts, Etc.	31
<u>EXHIBIT A/MAP 1</u> <u>RETAINED PREMISES</u>	A-1
<u>EXHIBIT B/MAP 2</u> <u>PROJECT PREMISES</u>	B-1
<u>EXHIBIT C</u> <u>PROJECT FACILITIES</u>	C-1
<u>EXHIBIT D</u> <u>ADDITIONAL FACILITIES</u>	D-1
<u>EXHIBIT E</u> <u>AUTHORITY SERVICES</u>	E-1
<u>EXHIBIT F</u> <u>GENERAL CONDITIONS</u>	F-1
<u>EXHIBIT G</u> <u>WEST VALLEY PROJECT DEMONSTRATION ACT</u>	G-1

COOPERATIVE AGREEMENT

THIS AGREEMENT, effective as of October 1, 1980,* between THE UNITED STATES OF AMERICA, acting by and through the UNITED STATES DEPARTMENT OF ENERGY (the "Department"), Washington, D.C., and the STATE OF NEW YORK (the "State"), acting by and through the NEW YORK STATE ENERGY RESEARCH AND DEVELOPMENT AUTHORITY, a public benefit corporation organized and existing under the Laws of the State of New York (the "Authority"), Albany, New York.

W I T N E S S E T H:

WHEREAS the West Valley Demonstration Project Act, Pub. L. 96-368 (the "Act"),** provides that the United States Secretary of Energy (the "Secretary") shall carry out a high level radioactive waste management project at the Western New York Nuclear Service Center (the "Center"), in West Valley, New York; and

WHEREAS the Act provides that the Secretary and the State shall enter into a Cooperative Agreement, pursuant to the Federal Grant and Cooperative Agreement Act of 1977, Pub. L. 95-244, for the purpose of implementing such project; and

WHEREAS pursuant to Section 1856 of the Public Authorities Law of the State of New York, the Authority has assumed jurisdiction over the Center and holds the Center in the name of the State, subject to (a) a Lease and a Waste Storage Agreement (the "West Valley Agreements"), each dated as of May 15, 1963, between the New York State Atomic Research and Development Authority (the Authority's predecessor) and Nuclear Fuel Service, Inc. ("NFS") and (b) License CSF-1, originally issued to the New York State

* As amended effective September 18, 1981.

Atomic Research and Development Authority and NFS by the United States Atomic Energy Commission; and

WHEREAS Section 1854(6) of the Public Authorities Law of the State of New York authorizes the Authority to take such actions as it deems necessary or appropriate with respect to the Center in furtherance of the public interest in safe, reliable and economical energy supplies; and

WHEREAS the Congress and the New York State Legislature have appropriated funds to the Department and the Authority, respectively, portions of which have been expended and obligated in furtherance of such project;

NOW THEREFORE, in consideration of the premises and of the mutual covenants and agreements set forth herein, the Department and the Authority hereby agree as follows:

ARTICLE I

DEFINITIONS

Section 1.01. Definitions. As used herein, the following terms have the respective meanings set forth below:

Additional Facilities: as defined in Section 4.04.

Annual Authority Facility Credit: as defined in Section 5.03.

Annual Budget: as defined in Section 8.01.

Annual Project Costs: as defined in Section 5.03.

Annual Project Plan: as defined in Section 8.01.

Authority: as defined in the Preamble to this Agreement.

Authority Representatives: as defined in Section 8.07.

Authority Services: as defined in Section 5.03.

Board: as defined in Section 8.07.

Burial Facility: that portion of the Project Premises identified on Map 2 (annexed to Exhibit B) as the Commission-Licensed Burial Area.

Center: as defined in the Preamble to this Agreement.

Commission: the United States Nuclear Regulatory Commission and any Federal agency succeeding (by statute, regulation, agreement or otherwise) to the functions of such Commission.

Department: as defined in the Preamble to this Agreement.

Fuel Receiving and Storage Area: the area of the Process Plant at the Center used for the receipt and temporary storage of irradiated nuclear fuel elements, together with all fixtures, machinery, equipment, and apparatus affixed thereto or installed in connection therewith.

Legal Requirements: all laws, statutes, codes, acts, ordinances, orders, judgments, decrees, injunctions, rules, regulations, permits, licenses, authorizations, directions and requirements of all Federal, state, county, municipal and other governmental departments, commissions, boards, courts, authorities, agencies, officials and officers, whether foreseen or unforeseen, ordinary or extraordinary, now or hereafter enacted or in force, which shall be applicable to the Project or any portion thereof.

Process Plant: the existing facility at the Center used for the receipt, storage and reprocessing of irradiated nuclear fuel elements, including all personal property, equipment, supplies, and materials (including, without limitation, all radioactive materials) located therein.

Project: all activities undertaken in carrying out the solidification of the liquid high level radioactive wastes at the Center, including, without limitation, (a) solidification in a form suitable for transportation and disposal of the liquid high level radioactive wastes at the Center by vitrification or such other technology as the Department determines to be most effective for

solidification; (b) preparation of the Project Premises and Project Facilities to accommodate the foregoing, including such decontamination of facilities and equipment as may be necessary or appropriate; (c) development of containers suitable for the permanent disposal of the high level radioactive wastes solidified at the Center; (d) transportation, as soon as feasible after solidification and in accordance with applicable provisions of law, of the wastes solidified at the Center to an appropriate Federal repository for permanent disposal; (e) decontamination and decommissioning of the tanks, other facilities at the Center in which the solidified wastes were stored and all Project Facilities and other facilities, material, and hardware used in carrying out the solidification of the high level radioactive wastes at the Center; (f) disposal, in accordance with applicable licensing requirements, of low level and transuranic wastes produced by or as a result of the foregoing; and (g) all other activities necessary to carry out the foregoing.

Project Completion Date: the date upon which (a) the Project shall have been completed; (b) all other obligations of the Department hereunder shall have been performed in full; and (c) the Commission shall have issued or granted all licenses and approvals necessary for the Authority to resume possession and control of the Project Premises and Project Facilities; provided, however, that if the Department transports the high level radioactive wastes solidified under the Project from the Center for storage or disposal in a Federal repository other than a repository for the permanent disposal of such wastes and accepts title to, and all responsibility for, such wastes without payment by the Authority other than expressly provided in Section 3.05, then the failure of the Department to transport such wastes to an appropriate Federal repository for permanent disposal shall not prevent completion of the Project for the purposes of this definition.

Project Costs: each of the following: (a) those costs which have been or are incurred by the Department in carrying out the Project, consistent with the appropriation of funds for the Project; (b) the value to the Project of the Center as provided in Article V; and (c) the value of services performed by or on behalf of the Authority, its contractors, employees or agents as provided in Article V.

Project Facilities: the facilities described in Section 4.01 which the Authority is making available to the Department, in accordance with the Act and Article IV of this Agreement, to be used in the solidification of the high level radioactive wastes at the Center.

Project Premises: the land specified in Exhibit B and Map 2 appended thereto.

Project Term: the period commencing on the effective date of this Cooperative Agreement and ending at midnight on the Project Completion Date.

Retained Premises: the land specified in Exhibit A and Map 1 appended thereto.

RFP: as defined in Section 8.07.

Total Project Costs: the sum of all Project Costs.

Unavoidable Delay: delays due to strikes, acts of God, governmental restrictions, fire, unavoidable casualty or other causes beyond the Department's reasonable control.

West Valley Agreements: as defined in the Preamble to this Agreement.

ARTICLE II
PURPOSE, OBJECTIVES AND BENEFITS

Section 2.01. Purpose. The purpose of this Agreement is to establish a cooperative framework for the implementation of the Project by the Department and the Authority as contemplated by Section 2(b)(4) of the Act. The purpose of the Project is to develop and demonstrate technology for the removal, processing, solidification, and transportation of alkaline or acidic high level radioactive wastes in a manner which protects the public health and safety both during and after the completion of the Project. The Project is consistent with Federal policy that high level radioactive wastes be solidified and transferred to a Federal repository for permanent disposal.

Section 2.02. Objectives. The objectives of the Project, to be carried out in a manner which protects public health and safety, include:

- (a) decontamination of the Project Facilities at the Center to accommodate the solidification process;
- (b) development and implementation of technology for the removal of the high level radioactive wastes, including sludges, from the tanks at the Center;
- (c) solidification of the high level radioactive wastes at the Center;
- (d) development of containers for the disposal of the wastes solidified at the Center;
- (e) transportation of the solidified wastes to an appropriate Federal repository for permanent disposal;
- (f) decontamination and decommissioning of the tanks and other facilities in which the solidified wastes were stored, together with the Project Facilities and other facilities, material and

- hardware used in carrying out the Project, in accordance with such requirements as the Commission may prescribe; and
- (g) disposal of radioactive wastes (other than the high level radioactive wastes solidified at the Center) produced by or as a result of the foregoing activities.

Section 2.03. Benefits.

- (a) The benefits of the Project to the Department include:
- (i) demonstrating technology for the solidification of alkaline wastes on a significant scale;
 - (ii) demonstrating technology for the solidification of acidic thorium-based wastes on a significant scale;
 - (iii) providing greater experience with the decontamination and decommissioning of facilities used in the nuclear fuel cycle, including the demonstration of technology for the decontamination, decommissioning and disposal of high level radioactive waste storage tanks;
 - (iv) providing operational experience in the removal of sludge from high level waste tanks;
 - (v) developing methodologies for assessing the environmental impact of and developing safety criteria for other high level waste solidification projects; and
 - (vi) protecting public health and safety.
- (b) The benefits of the Project to the Authority include, in addition to the benefits to the Department:
- (i) solidification of the high level radioactive wastes at the Center and their transportation to an appropriate Federal repository for permanent disposal;

- (ii) decontamination and decommissioning of the facilities at the Center used in carrying out the Project; and
- (iii) disposal of radioactive wastes (other than the high level wastes solidified at the Center) produced by or in connection with the Project.

ARTICLE III

PROJECT MANAGEMENT AND RESPONSIBILITIES

Section 3.01. Department Responsibility for the Project. Except as provided in Section 3.03 and Article VIII, the Department shall have the sole responsibility for carrying out the Project, including without limitation the planning, design, management, implementation, and completion thereof in a manner which protects public health and safety.

Section 3.02. Specific Department Responsibilities. Without limiting the generality of its obligations under Section 3.01, the Department shall:

- (a) in accordance with the Act, during the fiscal year ending September 30, 1981:
 - (i) hold public hearings in the vicinity of the Center to inform residents of the area in which the Project is located of the activities to be undertaken under the Project and to receive their comments on the Project;
 - (ii) consider the techniques available for the solidification and handling of the high level radioactive wastes at the Center;
 - (iii) undertake detailed engineering and cost estimates for the Project;

- (iv) prepare a plan for the safe removal of the high level radioactive wastes at the Center for the purpose of solidification;
 - (v) conduct a safety analysis of the Project;
 - (vi) prepare such environmental analyses for the Project as may be required under the National Environmental Policy Act of 1969; and
 - (vii) enter into an agreement with the Commission to establish arrangements for review and consultation by the Commission with respect to the Project, as required by the Act.
- (b) on or before October 1, 1981:
- (i) assume exclusive possession of the Project Premises Project Facilities for use in carrying out the Project; and
 - (ii) assume responsibility for protection of public health and safety with respect to the Project Premises and Project Facilities for the duration of the Project.
- (c) commencing October 1, 1981, and in accordance with the Annual Project Plans provided for in Section 8.01 of this Agreement:
- (i) prepare the Project Premises and Project Facilities to accommodate the Project, including such decontamination of facilities and equipment as may be necessary or appropriate to permit their use in the Project;
 - (ii) solidify, in a form suitable for transportation and disposal, the high level radioactive wastes at the Center vitrification or such other technology as the Department

determines to be most effective for solidification, using the Project Facilities at the Center;

- (iii) develop containers suitable for the permanent disposal of the high level radioactive wastes solidified at the Center;
- (iv) maintain and thereafter transport, as soon as feasible after solidification and in accordance with applicable provisions of law, the waste solidified at the Center to an appropriate Federal repository for permanent disposal;
- (v) dispose of low level radioactive waste and transuranic waste produced by or as a result of the Project in accordance with applicable licensing requirements;
- (vi) decontaminate and decommission the tanks and other facilities at the Center in which the solidified wastes were stored and all Project Facilities and other facilities, material and hardware used in carrying out the Project, all in accordance with such requirements as the Commission may prescribe; and
- (vii) take all such other and further actions as may be necessary to carry out the Department's obligations hereunder.

Section 3.03. Authority Services. In connection with the Project, the Authority shall:

- (a) cooperate with the Department in the preparation of an environmental impact statement with respect to the Project and coordinate the reviews and comments thereon by all agencies of the State;
- (b) continue to cause the premises and facilities at the Center to be operated and maintained for use in the Project until October 1, 1981, or such earlier date on which the Department

assumes exclusive use and possession of the Project Premises and Project Facilities pursuant to Section 4.01;

- (c) authorize the Department to use the Project Premises and Project Facilities in accordance with the terms of Article IV of this Agreement;
- (d) provide services to the Department in connection with the Project in accordance with the provisions of Article V of this Agreement;
- (e) subject to the approval of NFS, or by designating the Department to act as the Authority's agent under the West Valley Agreements, provide such access to the Center as the Department may reasonably require until the Department is put in exclusive possession of the Project Premises and Project Facilities; and
- (f) otherwise participate and cooperate in carrying out the Project to the extent specified in Article VIII of this Agreement.

Section 3.04. Standard of Performance: Etc. The Department and the Authority shall carry out their respective obligations under this Article III in a prudent, professional, and workmanlike manner which does not jeopardize public health or safety and shall, subject to Unavoidable Delay, use their best efforts to complete the Project as expeditiously as possible. In performing such obligations hereunder, the Department and the Authority may utilize the services of such professionally qualified contractors, subcontractors, agents, and employees as they shall deem necessary or desirable, provided that no such utilization shall relieve either of them of any of their respective obligations under this Agreement.

Section 3.05. Maintenance and Management of the Solidified Wastes.

- (a) Nothing in this Agreement shall be construed as providing for

the transfer of title from the Authority to the Department of, or responsibility for, the high level radioactive wastes solidified under the Project, except to the extent provided in Subsection 3.05(b).

- (b) Upon delivery of the high level radioactive wastes solidified under the Project to an appropriate Federal repository for permanent disposal and payment to the Department of the funds held by the Authority for the maintenance of such wastes under the West Valley Agreements, with interest accrued thereon, the Department shall continue to be responsible for the control and management of such wastes and the Department and the Authority shall exchange documents necessary to evidence the foregoing. The Department shall control and manage such wastes using the funds paid to the Department under this Section and to the extent consistent with Section 11.02 of this Agreement. Nothing in the Act or this Agreement obligates the Department or the Federal government to pay the disposal costs, if any, for the solidified wastes.

ARTICLE IV

USE OF THE CENTER

Section 4.01. Possession of Project Premises and Project Facilities.

In accordance with the Act, the Authority hereby grants the Department, and the Department hereby assumes for use in carrying out the Project, exclusive use and possession of the Project Premises, together with the buildings, facilities and improvements of whatever kind and description erected thereon

and all personal property, equipment, supplies, and material, including all radioactive material and waste located or stored therein, including, but not limited to, the facilities described in Exhibit C (collectively, the "Project Facilities") effective at 12:00 Noon on October 1, 1981, or such earlier date and time as may be mutually agreed upon by the Department and the Authority. Subject to the provisions of Article VI, the Authority shall take all steps necessary to put the Department into possession of the Project Premises and Project Facilities in accordance with the terms of this Agreement. The Department shall remain in exclusive use and possession of the Project Premises and Project Facilities and shall comply with its obligations hereunder throughout the remainder of the Project Term.

Section 4.02. Use of the Project Premises, Project Facilities, and Retained Premises. The Department shall use the Process Plant in carrying out the Project. Project Premises and Project Facilities shall be used solely for the purpose of carrying out the Project and for no other purpose whatsoever, except as expressly provided in this Agreement. During the Project Term, the Authority shall not use, or authorize the use of, the portion of the Center not subject to the exclusive use and possession of the Department (the "Retained Premises") in a manner which interferes with carrying out the Project.

Section 4.03. Condition on Surrender. On the Project Completion Date, the Department shall surrender to the Authority

- (a) the Process Plant and
- (b) such other Project Premises, Project Facilities and any other non-federally-owned facilities, material, and hardware which it uses in carrying out the Project

decontaminated and decommissioned in accordance with the Act and such requirements as the Commission may prescribe; provided, however, that the

Authority may (but shall be under no obligation to) agree that certain facilities used in carrying out the Project may be surrendered to it without having been decontaminated and decommissioned. In no event shall the Department be required under this Agreement to decontaminate and decommission materials buried in the Burial Facility prior to the assumption by the Department of possession of, and responsibility for, the Project Premises and Project Facilities."

Section 4.04. Additional Rights Granted to the Department. Commencing October 1, 1981, the Authority hereby grants the Department such rights as the Authority may have of access to and the use of all water, rail, electric and gas utilities and monitoring sites, including, but not limited to, the facilities described in Exhibit D (collectively, the "Additional Facilities") located on the Retained Premises, and as may be reasonably necessary to carry out the Project. The Department shall assume all costs incurred in connection with the Department's operation, use and maintenance of the Additional Facilities.

Section 4.05. Rights Retained by the Authority. Anything to the contrary contained herein notwithstanding, during the Project Term the Authority shall without charge:

- (a) be entitled to use of * to 800 square feet of furnished office space within the existing Administration Building at the Center, including such telephone service, parking facilities and document duplicating services as may be reasonably necessary for Project purposes;

*So in the original -- should read "up to 800 square feet".

- (b) subject to reasonable notice and coordination with Project activities, have the right of ingress and egress across the Project Premises for the purpose of access to the Retained Premises and such office space;
- (c) subject to reasonable notice and coordination with Project activities, have direct access to and the use of all water, rail, electric, gas and other utilities and monitoring sites and facilities located within the Project Premises and Project Facilities to the extent necessary for the conduct of operations on the Retained Premises; and
- (d) be entitled to continue to allow the storage of those irradiated nuclear fuel elements presently stored in the Fuel Receiving and Storage Area at the Center pursuant to the provisions of Section 4.11.

Section 4.06. Present Condition of Center. The Act directs the Department to carry out the Project at the Center, and therefore the Department's responsibilities hereunder shall not be affected by any defect in the condition or fitness of the Project Premises or Project Facilities nor shall the Department have any claim against the Authority arising from any such defect.

Section 4.07. Changes, Alterations, and Additions. Subject to the provisions of Article VIII, the Department may make, from time-to-time, such changes, alterations and additions to the Project Facilities and Additional Facilities as may be reasonably necessary to carry out the Project.

Section 4.08. Operation, Maintenance, and Repair. The Department shall operate and maintain the Project Premises, Project Facilities, and such Additional Facilities which it uses in carrying out the Project, and may be necessary or appropriate to carry out the Project in a manner which

protects public health and safety and complies with the provisions of this Agreement. As used in this Section, the term "maintain" shall include, but not be limited to, the obligation to make all necessary and appropriate repairs, changes, alterations, and additions thereto or replacements thereof, interior and exterior, structural and non-structural, ordinary and extraordinary, foreseen and unforeseen.

Section 4.09. Damage or Destruction. Notwithstanding the provisions of Section 4.08, nothing in this Agreement shall require the Department to repair or restore any Project Facility which is damaged or destroyed by accident, fire, or other casualty, except that the Department shall repair or restore any such facility to the extent necessary to protect the public health and safety, continue and complete the Project, or as may be reasonably required in connection with any responsibilities the Authority may have with respect to the Center upon completion of the Project and the Department shall decontaminate and decommission any other damaged or destroyed facility pursuant to Section 3.02 of this Agreement.

Section 4.10. Responsibility for Project Premises and Facilities. If the Department shall not occupy the Project Premises by October 1, 1981, the cost of operation and maintenance of the Project Premises and Project Facilities during the Project Term, including the management of the radioactive materials and wastes stored therein, and protection of public health and safety shall nevertheless be deemed Project Costs, payable by the Department.

Section 4.11. Additional Department Services.

(a) To provide for the efficient management of the Project Premises and Project Facilities during the Project Term, the Department shall:

- (i) accept such quantities of wastewater as are generated as a result of the maintenance of the facilities used for

- the disposal of low level radioactive wastes within the Retained Premises and treat such wastewater at treatment facilities, whether existing or hereafter constructed, on the Project Premises. As used in this subsection, the word "treat" includes, but is not limited to, the use of chemical and/or physical processes for the removal of pollutants, including radioactive materials, from wastewaters, the discharge of such wastewaters after the application of such physical and/or chemical processes, and the disposal of any solid wastes resulting therefrom;
- (ii) in connection with its responsibility for operation and maintenance of the Fuel Storage and Receiving Area at the Center for use in the Project, be responsible as agent of the Authority for the management, maintenance and surveillance of the irradiated nuclear fuel elements now stored therein; and
- (iii) provide general site surveillance and security services for the Retained Premises and Facilities.

The Incremental Cost of providing the foregoing services shall be the sole and exclusive responsibility of the Authority, and the Authority agrees to promptly reimburse the Department for such Incremental Cost. As used in this Section, the term "Incremental Cost" means any costs which would not have been incurred but for the service being rendered and shall include, but not be limited to, (A) costs of alterations or repairs attributable to the maintenance of the irradiated nuclear fuel elements stored in the Fuel Receiving and Storage Area; (B)

the cost of any claims, damage, losses, and expenses (including reasonable attorney's and expert witness' fees) arising out of or resulting from the performance of the services described in this Section, except where such claim, damage, loss, or expense results from the negligence of the Department, its contractors, employees, or agents; and (C) increases in operating expenses attributable to the services rendered.

- (b) The Department shall consult with, and obtain the approval of, the Authority with respect to any extraordinary expenses which it proposes to incur in connection with providing services under this Section. In the event that the Authority withholds such approval, it shall be responsible for any damages or claims resulting therefrom.

Section 4.12. Utility and Transportation Services. Commencing October 1, 1981, the Department shall pay or cause to be paid, all charges or expenses for gas, electricity, heat, water, steam, and power and for telephone, communications, and protective services and for all other public or private utility services and all public or private rail or highway services which shall be used, rendered, or supplied upon, to or in connection with the Project Premises and Project Facilities or any part thereof at any time during the remainder of the Project Term and shall do all other things reasonably required for the continuance of all such services as the Department determines are necessary or useful in the proper maintenance and operation of the Project Premises and Project Facilities.

ARTICLE V
COST OF THE PROJECT

Section 5.01. Estimated Cost of the Project. The Total Project Costs are estimated by the Department to be two hundred eighty-five million dollars (\$285,000,000).

Section 5.02. Cost-Sharing. The Department shall pay ninety percent (90%) of the Total Project Costs and the Authority shall pay ten percent (10%) of such costs in the manner set forth in Section 5.03. The Authority may not use Federal funds to pay its share of the cost of the Project. The Department and the Authority shall use their best efforts to minimize Total Project Costs.

Section 5.03. Accounting for Project Costs.

- (a) Within sixty days after the end of each Federal fiscal year commencing on or after October 1, 1980, and continuing until the end of the Federal fiscal year in which the Project Completion date occurs, the Department shall deliver to the Authority an accounting of all Project Costs incurred by the Department during the preceding Federal fiscal year ("Annual Project Costs").
- (b) The Authority shall pay its share of the Annual Project Costs for any particular Federal fiscal year on or before the next July 1 after the Department delivers its accounting for that year, in the following manner:
 - (i) by expending funds for the provision of services ("Authority Services") as agreed pursuant to Section 5.03(d) for the applicable Federal fiscal year;

- (ii) by expending a portion ("Annual Authority Facility Credit") of the Authority's credit for the value of making the Project Premises, Project Facilities, and Additional Facilities available to the Department pursuant to Article IV of this Agreement, which premises and facilities for the purpose of this Agreement have been determined by the Department to have a value to the Project of twelve million dollars (\$12,000,000), which is hereby credited to the Authority beginning October 1, 1981, provided, however, that if the Project has not been completed within ten years from the date of this Agreement and the entire twelve million dollar credit has been expended, the Authority and the Department shall determine by amendment to this Agreement a further credit to the Authority for the value of the further use of the Project Premises, Project Facilities, and Additional Facilities for the Project for the additional time necessary to complete the Project; and
 - (iii) by paying the balance to the Department by check or other negotiable instrument.
- (c) If, for any Federal fiscal year, the sum of the funds that the Authority expended providing Authority Services pursuant to Section 5.03(b)(i) and the Annual Authority Facility Credit expended pursuant to Section 5.03(b)(ii) exceeds the Authority's share of the Annual Project Costs for that year, then such excess expenditures in providing Authority Services shall be credited to the Authority as the expenditure of funds

for the provision of Authority Services in the next succeeding Federal fiscal year in addition to the funds expended in such succeeding year as agreed pursuant to Section 5.03(d).

- (d) Before the commencement of the Federal fiscal year commencing October 1, 1981, and before the commencement of each succeeding Federal fiscal year until the Project is completed, the Department and the Authority shall agree in writing on Authority Services to be provided to the Project during the next Federal fiscal year and the amount of funds to be expended by the Authority in providing those services, which shall include, but need not be limited to, the services described in Exhibit E. Authority Services and the value thereof may be adjusted or modified during the applicable Federal fiscal year upon agreement in writing between the Department and the Authority. During the Federal fiscal year ending September 30, 1981, credit shall be given for Authority Services in the amount of five hundred seventy-five thousand dollars (\$575,000) and the Authority shall provide an accounting to the Department for providing such services.

Section 5.04. Adjustments. All values or estimates of costs used in this Article are expressed in 1980 dollars. The Department and the Authority recognize that the Total Project Costs will require revision, from time-to-time, to account for the effects of inflation and other factors. The Department and the Authority also recognize that the value of the Project Premises, Project Facilities, Additional Facilities, and Authority Services to the Project will likewise require revision, from time-to-time, to account for the effects of inflation and other factors.

ARTICLE VI

LICENSING AND COMPLIANCE WITH LAWS

Section 6.01. Technical Assistance: Application to the Commission.

The Department shall provide the Authority with technical assistance in securing regulatory license amendments or changes as may be required or appropriate in connection with the Project. As provided in the Act, the Department and the Authority shall cooperate in the joint submission to the Commission of an application for any such licensing amendment or change as may be required to carry out the Project.

Section 6.02. Licensing. The Authority, with the technical assistance of the Department, shall make timely application to the Commission for

such licensing action, if any, as may be required for the Authority to assume possession of the Project Premises and Project Facilities upon completion of the Project.

Section 6.03. Compliance with Legal Requirements. The Department

shall be responsible for compliance with all Legal Requirements applicable to its participation in the Project, including without limitation, the National Environmental Policy Act of 1969, and the Authority shall be responsible for compliance with all Legal Requirements applicable to its participation in the Project, including without limitation the New York State Environmental Quality Review Act; provided, however, that nothing in this Agreement shall be deemed to constitute a waiver of sovereign immunity by either the Department or the Authority nor shall it otherwise affect the Department's rights under the Supremacy Clause of the United States Constitution. The Department and the Authority shall cooperate in the preparation of such environmental analyses of the Project as may be required under Federal and State

law, and the Authority shall coordinate the review by all State agencies of all such environmental analyses. Actions by the Department and the Authority under this agreement will only be taken in accordance with the applicable legal requirements of the National Environmental Policy Act and the New York State Environmental Quality Review Act, respectively.

ARTICLE VII
INDEMNIFICATION

Section 7.01. Indemnification.

- (a) Subject to the provisions of Section 11.02, the Department shall indemnify and hold the Authority and the State (and their respective members, officers, employees, and agents) harmless from all claims, damages, losses, and expenses (including reasonable attorney's and expert witness' fees) or liabilities, arising out of or resulting from the performance of (or failure to perform) the Department's obligations hereunder.
- (b) Subject to the provisions of Section 11.02, the Authority shall indemnify and hold the Department and the United States of America (and their respective members, officers, employees, and agents) harmless from all claims, damages, losses, and expenses (including reasonable attorney's and expert witness' fees) or liabilities, arising out of or resulting from the performance of (or failure to perform) the Authority's obligations hereunder.

ARTICLE VIII
PROJECT PLANS, REPORTS, CONSULTATION, AND COORDINATION

Section 8.01. Annual Project Plan and Budget. Before the commencement of the Federal fiscal year commencing October 1, 1981 and before the commencement of each succeeding fiscal year until the Project is completed, the Department shall prepare:

- (a) an annual plan for the implementation of the Project (the "Annual Project Plan") which shall (i) report on progress achieved during the current Federal fiscal year in implementing the Project, significant obstacles or problems encountered in implementing the Project, and proposed solutions to such obstacles or problems; and (ii) detail all major actions to be taken, decisions required to be made, and work to be performed in connection with the Project during the next fiscal year and to complete the Project; and
- (b) an annual budget for the implementation of the Project (the "Annual Budget") which shall detail all estimated expenditures and costs which : (i) have been incurred as Project Costs; (ii) will be incurred as Project Costs during the current and next fiscal year; and (iii) will be required to complete the project.

The Annual Project Plans and Annual Budgets shall be in sufficient detail to allow determinations to be made under Sections 8.02 and 8.03 and may be the report submitted to Congress under Section 4 of the Act if it contains the information described above. Any amendment of the Annual Project Plans and Annual Budgets shall conform to the foregoing requirements. The Department

shall carry out the Project in accordance with the Annual Project Plans and Annual Budgets, as amended. The Annual Project Plans and Annual Budgets and any amendments thereto shall be provided to the Authority promptly after preparation.

Section 8.02. Consultation and Agreement in Certain Events. The Department shall consult with the Authority with respect to the development of, and any amendment to, the Annual Project Plans and Annual Budgets and the Authority's agreement shall be required with respect to matters contained therein (or other major decisions in carrying out the Project) that materially affect obligations (i) which the Authority may have with respect to the Center after the completion of the Project, or (ii) which the Authority may have exclusive of the Project; provided, however, that the agreement of the Authority shall not be required with respect to the decontamination and de-commissioning of Project Facilities at the Center pursuant to Commission requirements under Section 3.02(c)(vi).

Section 8.03. Resolution of Disputes as to Project Costs. In the event the Department and the Authority are unable to agree through their respective normal management chains with respect to any matter contained in the Annual Project Plans and Annual Budgets (or any amendment thereto) that materially affects Total Project Costs, then either the Department or the Authority may refer the matter to the Secretary and the Governor of the State of New York for resolution. Pending such resolution, costs associated with such matter shall not be included in the determination of Annual Project Costs pursuant to Section 5.03. The Department may also elect not to fund activities with respect to such matter until such resolution. The provisions of this Section 8.03 shall not apply if the Department determines that the resolution of the matter as proposed by the Authority would present an unreasonable risk to public health and safety.

Section 8.04. Consultation and Coordination. Before October 1, 1981, the Department and the Authority shall develop and mutually agree upon detailed plans to assure continued consultation and coordination between the Department and the Authority during the Project Term. These plans shall include, but need not be limited to, provision for the following:

- (a) the Authority's designation of a Project Engineer who is intended to be resident at the Center during the Project;
- (b) periodic meetings (to be held not less often than monthly) of the Department's Project Manager and the Authority's Project Engineer; attendance by the Authority's Project Engineer at other project meetings when mutually agreed on, but such agreement shall not unreasonably be withheld.
- (c) the Authority's receipt of direct distribution of all Department Monthly Integrated Project Reports, draft and final contractors' technical reports received by the Department, and reasonable access to such other documents bearing on the Project as the Authority may request, subject to any proprietary rights retained by the Department's contractors and patent clearance procedures;
- (d) the development of Emergency Preparedness Plans coordinating Federal, State, and local actions and responsibilities in the event of an emergency at the Center, which shall be submitted to the Commission for comment;
- (e) receipt by the Authority's Project Engineer of all baseline plans and specifications for the construction of major changes, alterations, or additions to the Project Facilities and Additional Facilities which require Department approval;

- (f) the Department's receipt of environmental surveillance reports affecting the Project and reasonable access to such other documents in the control of the State which bear on the Project; and
- (g) the Department's receipt of plans and schedules for the maintenance and repair of facilities within the Retained Premises.

Section 8.05. Notice and Consultation in Certain Events. The Department shall promptly notify and consult with the Authority's Project Engineer with respect to (a) any unexpected developments or material problems that may develop in implementing the Project or fulfilling the Department's responsibilities under this Agreement; and (b) any event occurring at the Project Premises or Project Facilities which affects, or* may affect, public health or safety.

Section 8.06. Authority's Right of Inspection. Throughout the Project Term, the Authority shall have the right to enter upon the Project Premises and Project Facilities for the purpose of inspecting the same and of observing the progress of the Project. Such entry shall be at reasonable times and in a manner which does not interfere with the Department's obligations under this Agreement. Nothing contained in this Agreement shall be construed as creating or implying any duty on the part of the Authority to make any such inspection or to make any repairs or remedy any defect disclosed thereby and the Authority shall incur no liability or obligation for failing to make any such inspection or repairs or to remedy any such defect, or, once having undertaken any such inspection, for not making the same carefully or properly. No commencement or completion by the Authority of any such inspection shall create or imply any such duty, liability, or obligation or constitute a waiver by the Authority in respect of any matters disclosed thereby.

* should read "or may affect".

Section 8.07. Consultation in Contractor Selection and Evaluations.

The Authority shall not be a member of the Source Evaluation Board ("the Board"); provided, however, that:

- (a) draft copies of the statement of work, evaluation criteria, including rating sheets minus the weights or values assigned therein, and subsequently the Request For Proposals ("RFP"), will be made available to not more than three Authority employees or consultants designated by the Authority (the "Authority Representatives") and the Authority Representatives will be afforded opportunities to consult with the Board by submitting written comment and/or meeting with the Board prior to: (i) final decisions with respect to the statement of work and evaluation criteria; and (ii) issuance of the RFP;
- (b) Authority Representatives shall have the opportunity to review the technical proposals, cost proposals, and to meet and consult with the Board with respect thereto prior to establishment of a competitive range. Schedule of timing of reviews shall be arranged by the Authority with the Board;
- (c) Authority Representatives shall have the opportunity to participate as observers in the oral presentation and site visit for all proposers in the competitive range and thereafter will have the opportunity to consult with the Board prior to final ranking of proposers;
- (d) Authority Representatives shall have the opportunity to attend and participate in the briefing of the Source Selection Officer, including an opportunity at the briefing to review all materials made available at the briefing. The Chairman of the Authority shall be promptly notified of the final selection;

- (e) the Department shall also provide for the Authority's participation in periodic contractor management reviews and evaluations and shall furnish audit reports and contractor management review and evaluation reports for the Authority's review; and
- (f) Authority Representatives shall execute confidentiality certificates and conflict of interest certificates in the form the Department prescribes for members of the Board.

Section 8.08. No Limitation on Responsibilities. All actions by the Department and the Authority under this Article shall be taken in a timely manner consistent with the expeditious completion of the Project and the Department's procurement schedule. Neither the provisions of this Article nor any action taken by the Authority (or the failure of the Authority to take any such action) under this Article shall limit or affect the Department's rights or responsibilities under this Agreement.

ARTICLE IX ASSIGNMENTS

Section 9.01. Assignments. This Agreement may not be assigned by either the Department or the Authority except (a) by operation of law; or (b) by the Authority in connection with the transfer of the Center or any portion thereof to any agency, authority, or instrumentality of the State of New York.

ARTICLE X

INSURANCE

Section 10.01. Price-Anderson Act. Prior to October 1, 1981, the Department shall determine, pursuant to 41 C.F.R. 9-10.5005, whether to extend an indemnity to any contractor it may retain with respect to its responsibilities at the Center under this Agreement. If the Department determines to extend an indemnity to its contractor under Section 170(d) of the Atomic Energy Act of 1954, as amended, and 41 C.F.R. Subpart 9-10.50, the Authority shall be a person indemnified to the extent that the Authority incurs public liability for a nuclear incident or extraordinary nuclear occurrence (as the underlined terms are defined in the Atomic Energy Act of 1954 as amended) arising out of or in connection with the activities covered by such indemnity. The Authority shall be furnished with a copy of any agreement containing the terms of such indemnity.

Section 10.02. Other Insurance. If the Department obtains, or authorizes or requires any of its contractors or subcontractors, regardless of tier, to obtain public liability insurance, property damage insurance, or insurance against any hazard, the Authority shall be named as an additional insured. The Authority shall be furnished with a certificate evidencing any such insurance.

ARTICLE XI

MISCELLANEOUS

Section 11.01. No Waiver. Nothing herein shall constitute or imply any waiver by the Authority of any claims it may have against NFS or any other party under the West Valley Agreements or otherwise in connection

with the Center; provided that the foregoing shall not be construed as affecting the respective rights and liabilities as between the Department and the Authority as provided in the Act.

Section 11.02. Availability of Funds. The respective undertakings of the Department and the Authority under this Agreement are conditioned upon the availability of appropriated funds.

Section 11.03. General Conditions. Subject to the provisions of Section 11.04 of this Agreement, the General Conditions attached hereto as Exhibit F are incorporated herein by reference.

Section 11.04. Order of Precedence. In the event of an inconsistency among provisions of this Agreement, the inconsistency shall be resolved by giving precedence as follows:

- (a) Cooperative Agreement Articles;
- (b) Exhibits; and
- (c) General Conditions.

Section 11.05. Counterparts, Etc. Neither this Agreement nor any term hereof may be changed, waived, discharged, or terminated orally, but only by an instrument in writing signed by the party against which enforcement of the change, waiver, discharge, or termination is sought. The headings in this Agreement are for convenience of reference only, and shall not define or limit the terms hereof. Except as provided herein, all the terms of this Agreement shall be binding upon and inure to the benefit of and be enforceable by the respective successors and assigns of the parties hereto. This Agreement may be executed in any number of counterparts, each of which shall be an original but all of which together shall constitute one and the same instrument.

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed by their respective officers thereunto duly authorized as of the date set forth above.

UNITED STATES DEPARTMENT OF ENERGY

(SEAL)

By James B. Edwards*
(Secretary)

NEW YORK STATE ENERGY RESEARCH AND
DEVELOPMENT AUTHORITY

By James L. Larocca
(Chairman)

I, Carmine J. Clemente, certify that I am the Secretary of the New York State Energy Research and Development Authority; that James L. Larocca, who signed this document on behalf of the Authority was then Chairman of the Authority; that this document was duly signed for and on behalf of the Authority by authority of its governing body and is within the scope of its legal powers.

IN WITNESS WHEREOF, I have hereunto affixed my hand and the seal of the New York State Energy Research and Development Authority.

/s/Carmine J. Clemente
Carmine J. Clemente
Secretary

(SEAL)

*The original Agreement was signed on behalf of the Department by Under Secretary Worth Bateman.

EXHIBIT A

Retained Premises

ALL THAT TRACT AND PARCEL OF LAND consisting of 3,330.925 acres more or less, situated in the Town of Ashford, County of Cattaraugus (Parcel 1) and 14.35 contiguous acres, more or less, situated in the Town of Concord, County of Erie (Parcel 2) as shown on a map (annexed hereto as Map No. 1) depicting the Western New York Nuclear Service Center prepared by Lockwood, Kessler & Bartlett, Inc. Consulting Engineers, for the State of New York Office of Atomic Development, and revised by Pratt, Edwards & Moncreiff, P.C. on January 2, 1969 being bounded and described as follows:

PARCEL 1

ALL THAT TRACT OR PARCEL OF LAND acquired in the name of The People of the State of New York by appropriation in the manner provided by Section 30 of the Highway Law pursuant to the provisions of Article 19-D of the Executive Law, described in and shown on Map No. 1 (a) filed in the office of the Department of Public Works of the State of New York on June 15, 1961, (b) filed in the Department of State of the State of New York on June 16, 1961, and (c) filed in the office of the County Clerk of Cattaraugus County on June 20, 1961, such tract or parcel of land being situate in the Town of Ashford, County of Cattaraugus, State of New York, being all of Lots 56, 61, 62, 63 and 67 and part of Lots 49, 50, 55, 57, 64, 66, 68, 69, 70 and 74 in Township 6, Range 6, also part of Lots 32, 40 and 48 in Township 5, Range 6 of Holland Land Company survey, bounded and described as follows:

COMMENCING at a point on the southerly line of Lot 61, said point being at the northwest corner of Lot 40 and the northeast corner of Lot 48, thence westerly along the southerly line of said Lot 61, 588.240 feet to the point of beginning, said point of beginning being the intersection of the southwest corner of Lot 61 and the southeast corner of Lot 66 with the north line of Lot 48, thence westerly along the southerly line of Lot 66, 1,536.078 feet to a point, thence northerly through the property of Clinton Johnson (reputed owner), on a line parallel to the easterly line of said Lot 66, 1,128.595 feet to the southeasterly corner of property of Ollis Beason and Dolores Beason (reputed owners), thence westerly along southerly property line of Ollis Beason and Dolores Beason (reputed owners) and Ralph V. Wilcox (reputed owner), 2,332.156 feet to a point on the westerly line of Lot 66, said point being 1,155.267 feet distant northerly along said westerly line of Lot 66 from a point, said point being the corner formed by the intersection of the boundaries of Lots 66 and 71 in Township 6, and Lot 56 in Township 5; thence northerly along the said westerly line of Lot 66 and continuing along the westerly line of Lot 67, 6,757.415 feet to a point, said point being the corner formed by the intersection of the boundaries of Lots 67, 68, 72 and 73; thence easterly along the northerly line of Lot 67, 1,030.00 feet to a point on the easterly boundary line of Boberg Road, thence northwesterly along the said easterly boundary line of Boberg Road as it winds and turns, 361.350 feet to a point on the division line between the property of Emerson B. Carl and Judith W. Carl (reputed owners) on the west and the property of Arthur O. C. Gross and Virginia E. Gross (reputed owners) on the east, thence northeasterly along said division line on a course $N21^{\circ}47'17''E$ 440.00 feet to a point; thence through the property of Arthur O. C. Gross

and Virginia E. Gross (reputed owners) on a course N35°08'30"E 1,126.662 feet to a point on the easterly boundary line of Rock Springs Road; thence northerly along the said easterly boundary line of Rock Springs Road; thence northerly along the said easterly boundary line of Rock Springs Road as it winds and turns 564.873 feet to a point on the division line between the property of Arthur Gross and Marion Mall (reputed owners) on the south, and the property of Robert J. Burns and Mary Lou Burns (reputed owners) on the north; thence westerly along the southerly boundary line of property of Robert J. Burns and Mary Lou Burns (reputed owners) S89°23'26"W 347.328 feet to a point, said point being the southwest corner of the property of Robert J. Burns and Mary Lou Burns (reputed owners); thence along the division line between the property of Robert J. Burns and Mary Lou Burns (reputed owners) on the east, and the properties of Edward Warzel and Sarah Warzel and Russell C. Miller and Pearl Miller (reputed owners) on the west N1°56'45"E 875.317 feet to the northwest corner of property of Robert J. Burns and Mary Lou Burns (reputed owners); thence easterly along the division line between the property of Robert J. Burns and Mary Lou Burns (reputed owners) on the south, and the property of Albert C. Pearce and Ruth E. Pearce (reputed owners) on the north, S89°38'24"E 40.014 feet to the easterly boundary line of Rock Springs Road; thence along said easterly boundary line of Rock Springs Road, 842.592 feet to the northerly line of Lot 68; thence easterly along the said northerly line of Lot 68, 1,147.324 feet to a point, said point being 1,342.694 feet westerly along said northerly line of Lot 68; from a corner formed by the intersection of the boundaries of Lots 63, 64, 68 and 69; thence northerly along the division line between the property of Albert C. Pearce and Ruth E. Pearce (reputed owners) on the east and the property of Eagle Tree Farms, Inc. (reputed owner) on the west, on a course N1°41'28"E 904.058 feet to a point on the northerly boundary line of the Baltimore and Ohio Railroad Company (formerly the Buffalo, Rochester and Pittsburgh Railway Company); thence northwesterly along the said northerly boundary line of the Baltimore and Ohio Railroad Company (formerly the Buffalo, Rochester and Pittsburgh Railway Company), the following twenty-six (26) courses and distances: N40°56'57"W 221.222 feet, on a curve to the right, having a radius of 922.37 feet, a length of 241.744 feet N25°55'57"W 210.300 feet, on a curve to the left, having a radius of 988.37 feet, a length of 375.194 feet N47°40'57"W 415.100 feet, on a curve to the left, having a radius of 1,179.28 feet, a length of 386.948 feet, N66°28'57"W 171.500 feet, N23°31'03"E 51.10 feet, N66°28'57"W 110.60 feet, S23°31'03"W 50.00 feet, N66°28'57"W 73.40 feet, on a curve to the right, having a radius of 1,877.08 feet, a length of 397.503 feet, N54°20'57"W 313.800 feet, on a curve to the right having a radius of 922.37 feet, a length of 404.606 feet, N29°12'57"W 5.70 feet, N86°47'03"E 46.90 feet, on a curve to the right, having a radius of 880.37 feet, a length of 14.70 feet, N29°12'57"W 134.40 feet, on a curve to the left, having a radius of 1,030.37 feet, a length of 543.697 feet, N59°26'57"W 53.30 feet, N29°40'04"E 197.721 feet, N60°51'57"W 374.800 feet, N20°13'57"W 182.00 feet S29°12'03"W 308.900 feet, and on a curve to the left having a radius of 2,939.93 feet, a length of 203.792 feet, and N66°51'57"W 257.815 feet to a point; thence northerly along the division line between the property of David and Helen Reed (reputed owners) on the east, and the property of Charles Edie (reputed owner) on the west N1°28'27"E 1,264.649 feet to a point; thence northwesterly through the property of Charles Edie (reputed owner) N22°27'14"W 623.173 feet and continuing on the same course through the property of David and Helen Reed (reputed owners) N22°27'14"W 1,373.013 feet to a point on the southerly bank of Cattaraugus Creek; thence easterly and northerly along said southerly bank

of Cattaraugus Creek as it winds and turns, the following four (4) courses and distances: S71°06'18"E 157.486 feet, S84°25'17"E 432.046 feet, N82°59'00"E 196.471 feet, and N44°47'46"E 198.698 feet to a point; thence southerly through the property of David and Helen Reed (reputed owners), the following two (2) courses and distances: S15°06'32"W 583.156 feet, and S22°56'13"E 862.168 feet to a point on the southerly boundary line of Emerson Road; thence southeasterly along the said southerly boundary line of Emerson Road as it winds and turns 1,284.287 feet to a point on the easterly line of Lot 74, said point being 1,462.00 feet distant northerly along said easterly line of Lot 74 from the corner formed by the intersection of the boundaries of Lots 69, 70 and 74; thence southerly along the said easterly line of Lot 74, 590.249 feet, thence southeasterly through the properties of Frederick C. Waterstram and Gladys E. Waterstram and Lorraine Deif (reputed owners) S39°40'52"E 2,986.63 feet to the southerly boundary line of Hayes Hollow Road; thence easterly and northerly along the said southerly boundary line of Hayes Hollow Road as it winds and turns 1,426.026 feet to a point; thence southeasterly through the property of Sidney P. Hayes (reputed owner) S68°43'07"E 462.908 feet to a point on the easterly line of Lot 69, said point being 1,320.699 feet distant southerly along said easterly line of Lot 69 from a corner formed by the intersection of the boundaries of Lots 64, 65, 69 and 70; thence continuing still through the property of Sidney P. Hayes (reputed owner) S68°43'07"E 2,021.513 feet to a point on the division line between the property of Sarah F. Emerson (reputed owner) on the east and Sidney P. Hayes (reputed owner) on the west; thence along said division line S2°03'30"W 1,200.00 feet to a point, said point being the southwest corner of property of Sarah F. Emerson (reputed owner); thence easterly along the division line between the property of Sarah F. Emerson (reputed owner) on the north, and Raymond Nelson (reputed owner) on the south, N89°53'16"E 720.06 feet to a point, said point being the southeast corner of property of Sarah F. Emerson (reputed owner); thence southerly along the division line between the property of Gordon Smith (reputed owner) on the east and Raymond Nelson (reputed owner) on the west, S2°03'30"W 825.00 feet to the southerly line of Lot 64; thence easterly along the said southerly line of Lot 64, 1,362.90 feet to a point, said point being a corner formed by the intersection of the boundaries of Lots 57, 58, 63 and 64; thence southerly along the easterly boundary of said Lot 63, a distance of 1,201.068 feet to a point; thence easterly along the division line between the property of Raymond L. Nelson and Mildred J. Nelson (reputed owners) on the north, and the property of Charles Zefers (reputed owner) on the south, N88°24'18"E 1,820.607 feet to a point on the westerly boundary line of County Road No. 32; thence southerly along the said westerly boundary line of County Road No. 32, 100.382 feet to a point; thence westerly through the property of Charles Zefers (reputed owner) on a line parallel to and 100.00 feet distant southerly from the aforementioned division line between the property of Raymond L. Nelson and Mildred J. Nelson (reputed owners) on the north, and Charles Zefers (reputed owner) on the south S88°24'18"W 1,691.919 feet to a point; thence southeasterly through the properties of Charles Zefers, Marcus N. Zefers and Marie C. Zefers (reputed owners) S55°33'13"E 4,417.530 feet to a point, said point being the corner formed by the intersection of the boundaries of Lots 50, 51, 56 and 57; thence easterly along the northerly line of Lot 50, 750.407 feet to a point; thence southerly on a line parallel to and 750.00 feet distant easterly from the westerly line of Lot 50 and Lot 49, through the properties of Wilson G. Smith and Luella Smith, Florence E. Mooney and Edward F. Fleckenstein, and Peter Simko and Viola Simko (reputed owners) 6,666.676 feet to a point, thence

westerly and still through the property of Peter Simko and Viola Simko (reputed owners) and at right angles to the last mentioned line, N88°39'14"W 298.930 feet to a point, said point being the northeasterly corner of property of Town of Ashford (reputed owner); thence southwesterly along the division line between the property of Peter Simko and Viola Simko (reputed owners) on the northwest and the property of Town of Ashford (reputed owner) on the southeast S52°54'24"W 575.883 feet to a point on the westerly line of Lot 49, said point being 936.628 feet distant northerly along said westerly line of Lot 49, from the corner formed by the intersection of the boundaries of Lots 49, 55 and 32, thence still continuing along the last mentioned division line S52°54'24"W 530.556 feet to the westerly boundary line of the Baltimore and Ohio Railroad (formerly the Buffalo, Rochester and Pittsburgh Railway Company), thence southerly along said railroad boundary 57.359 feet to the northerly boundary of Fox Hollow Road; thence along the northerly and westerly boundary as it winds and turns on said Fox Hollow Road 1,893.311 feet to a point; thence westerly along the division line between the property of Ralph W. Codd and Marjorie A. Codd (reputed owners) on the south and the property of David K. Miller and Adelhide Von B. Miller (reputed owners) on the north S89°36'19"W *feet to a point on the westerly line of Lot 32, thence northerly along said westerly line of Lot 32, 169.578 feet to a point, said point being 839.562 feet distant southerly along said westerly line of Lot 32 from a corner formed by the intersection of the boundaries of Lots 32, 40 and 55; thence westerly along the division line between the property of Walter Zefers (reputed owner) on the north and the property of Charles L. Hess and Iona A. Hess (reputed owners) on the south, said division line being parallel to and 839.52 feet distant southerly from the northerly line of Lot 40, 3,878.068 feet to a point on the westerly line of Lot 40, said point being 839.603 feet distant southerly along said westerly line of Lot 40, from a corner formed by the intersection of the boundaries of Lots 40, 48 and 61, thence northwesterly through the property of Charles L. Hess and Iona A. Hess and Walter Zefers (reputed owners) N34°51'01"W 1,018.366 feet to the point of beginning.

SUBJECT, to the following:

1. Rights of others, as their interests may appear, to the continued flow of any streams and water courses within said property.
2. All the right, title and interest, if any, of the United States of America in and to said property.
3. All the right, title and interest of Baltimore and Ohio Railroad Company (formerly Buffalo, Rochester and Pittsburgh Railway Company), its successors and assigns, in and to said property.
4. All the right, title and interest, if any, of public service corporations, their respective successors and assigns, in and to said property for the purposes of constructing, reconstructing, maintaining and operating facilities for the transmission or distribution of electricity, message by means of electricity, fluids and gases.
5. All public roads and highways located within the limits of said property on the date of acquisition of such property by The People of the State of New York, as such public roads and highways may, from time to time, be

*So in the original -- should read "S89°36'19"W 2,484.830 feet".

relocated by mutual agreement of the New York State Atomic Research and Development Authority and Nuclear Fuel Services, Inc.

EXCEPT for an area within that portion of Zone A which lies north of Buttermilk Road and consists of approximately 158.8 acres, as shown and described in Exhibit B as the Project Premises, said description being subject to completion of an accurate survey; and

EXCEPT for an area within that portion of Zone C which lies east of Zone A, such area consisting of approximately 4.574 acres and being bounded and described as follows: Commencing at a point on the centerline of Buttermilk Hill Road, Town of Ashford, designated by Cattaraugus County Department of Highways as P.C. 63+44.12 on Buttermilk Hill Road, said point being on the division line between Lot 55 and Lot 56 and being 1085.86 feet westerly measured along the centerline of Buttermilk Hill Road from the easterly boundary line of the Western New York Nuclear Service Center, thence S1°01'34"E 50.0 feet to a concrete highway marker on the highway boundary line, said highway marker being the point of beginning, thence (1) S88°58'26"W 325.0 feet along the highway boundary line to a point, thence (2) S1°01'34"E 500.0 feet to a point, thence (3) N88°58'26"E 400.0 feet to a point, thence (4) N1°01'34"W 490.0± feet to a point along the highway boundary line, thence (5) S88°58'26"W 75.0 feet to a point, said point being a concrete highway marker, thence (6) N1°01'34"W 10.0 feet to the point of beginning.

All bearings are referenced to True North of the 78°35' Meridian of West Longitude.

PARCEL 2

ALL THAT TRACT OR PARCEL OF LAND acquired in the name of The People of the State of New York by appropriation in the manner provided by

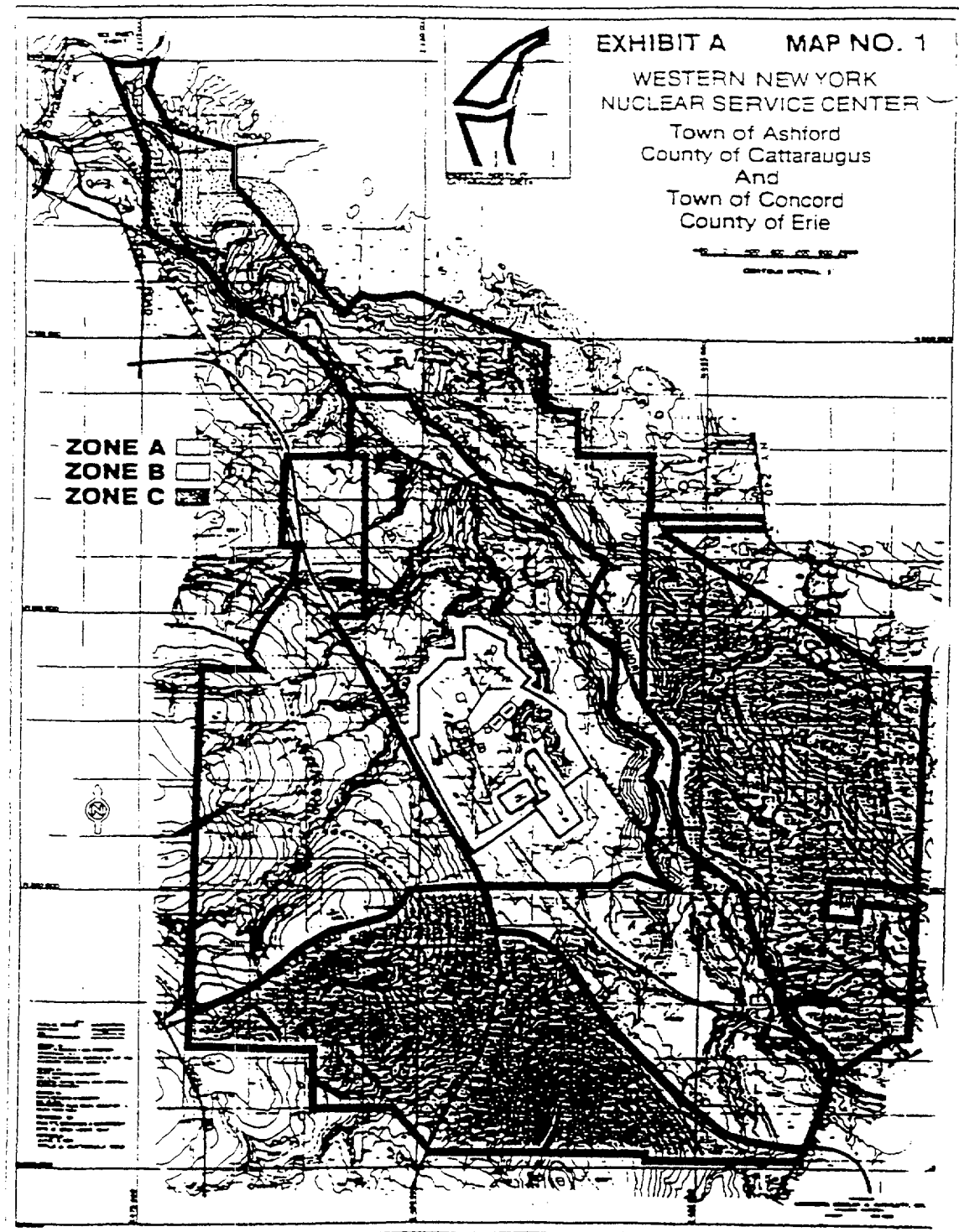
SUBJECT, HOWEVER, to the following:

1. Rights of others, as their interests may appear, to the continued flow of any streams and water courses within said property.

2. All the right, title and interest, if any, of the United States of America in and to said property.

3. All the right, title and interest, if any, of public service corporations, their respective successors and assigns, in and to said property for the purposes of constructing, reconstructing, maintaining and operating facilities for the transmission or distribution of electricity, messages by means of electricity, fluids and gases.

All bearings are computed from the Magnetic and are referenced to True North.



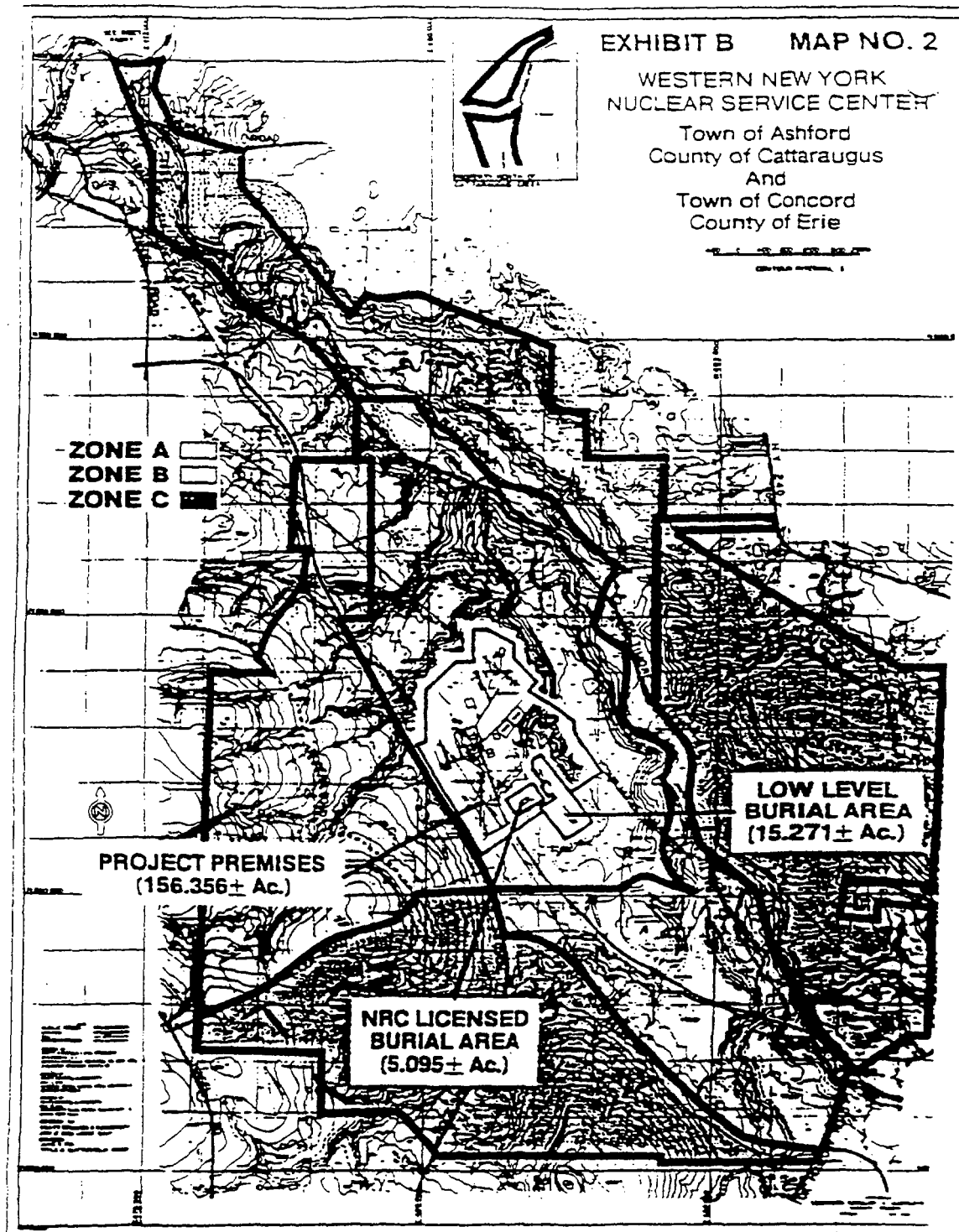


EXHIBIT B

Project Premises

ALL THAT TRACT AND PARCEL OF LAND situated in the Town of Ashford, County of Cattaraugus consisting of 158.8 acres, more or less, located north of Buttermilk Road in Zone A of a 3,300± acre parcel known as the Western New York Nuclear Service Center (See Exhibit A) as shown and identified on a map annexed hereto as Map No. 2.

SAID AREA consists of all lands and improvements:

(a) Within the perimeter of a six foot chain link fence INCLUDING a 5.1± acre rectangular area situated in the southeastern portion of the parcel identified on a map annexed hereto (Map No. 2) as the NRC Licensed Burial Area but EXCLUDING a 15.5± rectangular area situated in the southeastern portion of the parcel and identified on Map No. 2 as the State licensed Low Level Burial Area; and

(b) Between portions of said fence that run roughly parallel to Buttermilk Road and the northeastern edge of Buttermilk Road INCLUDING an entrance road into the fenced area, an administration building and security station situated on the eastern side of said entrance road and a paved rectangular parking area situated on the western side of said entrance road.

SUBJECT to all restrictions and covenants of record to which the Retained Premises are subject; and

SUBJECT to completion of an accurate instrument survey of the Project Premises, the NRC Licensed Burial Area located therein and the State licensed Low Level Burial Area together with legal descriptions for each area and a current map of said areas to be supplied within sixty days of the date of this Agreement.

EXHIBIT C

Project Facilities

Project Facilities shall consist of all buildings, facilities and improvements, including personal property, equipment and material located on the project premises, including radioactive material and waste, located or stored therein, including, but not limited to, the following:

1. Process plant. The existing facility at the Center used for the receipt, storage and reprocessing of irradiated nuclear fuel elements, including but not limited to the fuel receiving and storage area, analytical laboratories, control room, hot and process cells, offices, stack and associated equipment.
2. Waste storage facilities.
 - (a) High level waste tank farm area. The facilities for the storage of liquid radioactive waste, including the off-gas system, sampler*, all electrical, piping, ventilation, filtration, heating, cooling, control, surveillance, and mechanical equipment and instruments.
 - (b) Interceptors. Storage pools constructed of concrete and concrete and stainless steel used for temporary storage of radioactive liquid effluents from the plant prior to discharge into the lagoons.
 - (c) Storage lagoons. Holding ponds, pumps, pipelines and associated equipment for the storage of liquid radioactive effluents used in conjunction with the low level waste treatment plant, not including holding lagoons in the New York State-licensed burial area.
 - (d) Hardstand. The above-ground storage area for the weathering, decay and temporary storage of equipment and materials.
 - (e) NRC-licensed waste burial area. The area comprising about 7.2 acres used for the internment of high level solid radioactive wastes.
3. Low level waste treatment facility. The facilities used for processing contaminated aqueous waste from the plant and waste burial area, including the flocculator/clarifier, the centrifuge, filters, ion exchange system, the neutralizer, the pumps, pipes, tanks, ventilation system and related fixtures, machinery, equipment, installations or apparatus affixed thereto or installed in connection therewith.
4. Service facilities.
 - (a) Utility room building and utility service facilities. The buildings and facilities used to provide electricity, natural gas, steam, air, water, fuel, drainage, and sewerage, including

*So in the original -- should read "sampler".

but not limited to diesel generators, boilers, compressor pumps, water, oil and chemical storage tanks, cooling towers, transformers, switch gear room, sewer treatment plant, instruments, controls, fire equipment, culverts, ditches, sumps, pits, sludge ponds, and related fixtures, equipment, controls, instruments, installations and related supplies.

- (b) Service distribution systems. All air, air conditioning, water, electrical, natural gas, ventilation, sewerage and steam distribution systems, including the electrical power substation, wires, piping, shafts, ducts, mechanical equipment, and the controls and instruments relating thereto.
- (c) Administration area. The paved parking area, the administration building known as "the Annex" (including mobile home structures), all furnishings, equipment, carpeting, draperies and supplies.
- (d) Warehouse. The building used for storing materials, supplies and spare parts, including the contents thereof and the adjacent incinerator.
- (e) Maintenance shops. All buildings, equipment, machinery, supplies and parts used for maintenance, repair and upkeep, including the weld shop and the machine shop.
- (f) Laundry. The facility used to launder contaminated or potentially contaminated clothing and materials, including, but not limited to, all associated equipment, lockers and detection equipment located therein.
- (g) Railroad spur. The rail line serving the Center, including tracks, road bed and ties.
- (h) Environmental monitoring. All facilities and equipment, including air, deposition and water samplers*, dosimeters and monitors used for detecting the presence and level of radiation.
- (i) Meteorological Tower. The meteorological tower, the stack equipment and all other equipment used to monitor and record meteorological data.
- (j) Communication towers. All aeriels, towers, wires and associated communication equipment used for radio communication.
- (k) Service roads. All paved and unpaved improved roadways and walkways which provide access to project facilities.
- (l) Service vehicles. All vans, pick-up trucks, stake trucks, maintenance and utility vehicles, tractor trailer trucks, cask trucks, forklifts, work platform vehicles, all-terrain vehicles, cranes, loaders and plows or other associated equipment for services at the Center.

*So in the original -- should read "samplers".

5. Plant security system.

- (a) Gate house. The building and equipment through which personnel access to the project facilities is gained.
- (b) Chain link fencing. Approximately 12,000 feet of fencing, gates and associated equipment around the plant area, waste burial areas and the high level waste tank farm area.

6. Services. All equipment and supplies used for emergency, first aid, medical, fire, industrial safety, personal* monitoring, training and communication.

*So in the original -- should read "personnel".
C-3

EXHIBIT D

ADDITIONAL FACILITIES

Additional facilities shall consist of all facilities as may be reasonably necessary to carry out the Project located on that portion of the Center which is not subject to the exclusive use and possession of the Department, including but not limited to, the following:

1. Water supply and discharge. The water supply impoundment, streams, water, pump house, pump, pipeline and associated fixtures, equipment, controls and instruments used for supplying water to and carrying water away from the Project Premises.

2. Railroad spur. The rail line serving the Center, including tracks, ties and road bed.

3. Environmental laboratory. The building known as the "old school-house" south of the Project Premises on Rock Springs Road used for environmental and radiation analysis, including all related equipment, supplies, material, instruments.

4. Environmental monitoring. All facilities and equipment, including air, deposition and water samplers, dosimeters and monitors used for detecting the presence and level of radiation and other environmental information.

EXHIBIT E

AUTHORITY SERVICES

The Authority shall provide, or cause to be provided, at least the following Authority Services which benefit the Project: (a) participation in the Project under this Agreement by maintaining at the Authority's main offices sufficient staff and supplies, services, and equipment, and supplemental services, by contract or otherwise, to support said staff, to provide for adequate State participation, review, and monitoring of the Project and to: cooperate with the Department in the preparation of draft and final Federal environmental impact statements with respect to the Project; coordinate the reviews and comments thereon by agencies of the State; comply with the requirements of the State Environmental Quality Review Act; provide information from Authority files to the Department to facilitate the preparation by the Department of the detailed engineering and cost estimates for the Project, the plan for the safe removal of the high-level radioactive waste, and safety analyses required by Section 2(b)(3) of the Act; participate in the joint submission with the Department of applications to the Commission for such licensing amendments as are necessary in relation to the Project; review the Annual Project Plans, Annual Budgets, and other plans, specifications, and cost estimates for any proposed change, alteration, or addition to the Project which requires approval by the Department; and make available to the Department plans, schedules, and such other information as may be available to the Authority which the Department requires for the maintenance and repair of Project Facilities and Additional Facilities; and (b) participation in the Project under this Agreement by maintaining at the Center a Managing Project Engineer and such staff, supplies, equipment, and supplemental services, by contract or otherwise, to support the Managing Project Engineer as may be necessary in support of the activities described in (a) above; the value of the services described herein to equal the Authority's actual expenditures from funds appropriated for the purpose of providing such services, not to exceed, however, \$900,000 per annum (1980 dollars), which shall be adjusted to account for inflation in accordance with the CPI index.

EXHIBIT F

GENERAL CONDITIONS

COVENANT AGAINST CONTINGENT FEES

The Authority warrants that no person or selling agency has been employed or retained to solicit or secure this Agreement upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, excepting bona fide employees or bona fide established commercial or selling agencies maintained by the Authority for the purpose of securing business. For breach or violation of this warranty, the Department shall have the right to annul this Agreement without liability or in its discretion to deduct from the Agreement price or consideration, or otherwise recover, the full amount of such commission, percentage, brokerage, or contingent fee.

OFFICIALS NOT TO BENEFIT

No member of or delegate to Congress, or Resident Commissioner, shall be admitted to any share or part of this Agreement, or to any benefit that may arise therefrom; but this provision shall not be construed to extend to this Agreement if made with a corporation for its general benefit.

EQUAL OPPORTUNITY

During the performance of this Agreement, the Authority agrees as follows:

- A. The Authority will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The Authority will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, or national origin. Such action shall include, but not be limited to, the following: employment, upgrading, demotion, or transfer, recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Authority agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the Secretary of Labor setting forth the provisions of this Equal Opportunity clause.
- B. The Authority will, in all solicitations or advertisements for employees placed by or on behalf of the Authority, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin.
- C. The Authority will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract of understanding, a notice to be provided by the Secretary, advising the labor union or workers' representative of the Authority's commitment under this Equal Opportunity clause, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

- D. The Authority will comply with all provisions of Executive Order No. 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.
- E. The Authority will furnish all information and reports required by Executive Order No. 11246 of September 24, 1965, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the contracting agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.
- F. In the event of the Authority's noncompliance with the Equal Opportunity clause of this Agreement or with any of the said rules, regulations, or orders, this Agreement may be cancelled, terminated, or suspended, in whole or in part, and the Authority may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order No. 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order No. 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.
- G. The Authority will include the provisions of paragraphs (A) through (G) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order No. 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The Authority will take such action with respect to any subcontract or purchase order as the contracting agency may direct as a means of enforcing such provisions, including sanctions for non-compliance. Provided, however, that in the event the Authority becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the contracting agency, the Authority may request the United States to enter into such litigation to protect the interests of the United States.

ASSIGNMENT OF CLAIMS

- (a) Pursuant to the provisions of the Assignment of Claims Act of 1940, as amended (31 U.S.C. 203, 41 U.S.C. 15), if this Agreement provides for payments aggregating \$1,000 or more, claims for money due or to become due to the State from the DOE under this Agreement may be assigned to a bank, trust company, or other financing institution, including any Federal lending agency, and may thereafter be further assigned and re-assigned to any such institution. Any such assignment or reassignment shall cover all amounts payable under this Agreement and not already paid, and shall not be made to more than one party, except that any such assignment or reassignment may be made to one party as agent or trustee for two or more parties participating in such financing. Unless otherwise provided in this Agreement, payments to an assignee of any monies due or to become due under this Agreement shall not, to the extent provided in said Act, as amended, be subject to reduction or setoff.

CONVICT-LABOR

In connection with the performance of work under this Agreement, the Authority agrees not to employ any person undergoing sentence of imprisonment except as provided by Public Law 89-176, September 10, 1966 (18 U.S.C. 4082(c)(2)) and Executive Order 11755, December 29, 1973.

BUY AMERICAN ACT

The provisions of the Buy American Act (41 U.S.C. 10a-10d) are applicable to procurements by the Department in the performance of its respective obligations under this Agreement.

PATENTS, DATA, AND COPYRIGHTS

It is agreed that the Department's patent, data, and copyright provisions set forth in 41 CFR Part 9-9 shall control the allocation of all such rights; provided, however, the Department will use its best efforts to obtain on behalf of the Authority at least an irrevocable, non-exclusive paid-up license to make, use and sell any inventions throughout the world; provided, further, that to the extent the Department may be entitled to recoupment by reason of the grant of any waiver of rights under the above Part, the Department will use its best efforts on behalf of the Authority so that the waiver recipient will, in fulfilling its recoupment obligations, share such funds between the Department and the Authority on a pro-rata basis based upon the funding share contributed by each party under the Cooperative Agreement.

EXAMINATION OF RECORDS BY THE COMPTROLLER GENERAL
OF THE UNITED STATES AND THE COMPTROLLER
OF THE STATE OF NEW YORK

- A. The Authority and the Department agree that the Comptroller General of the United States and the Comptroller of the State of New York, respectively, or any of their duly authorized representatives, shall, until the expiration of three years after final payment under this Agreement or such lesser time specified in the Federal Procurement Regulations, have access to and the right to examine any directly pertinent books, documents, papers, and records of the Authority or the Department, respectively, involving transactions related to this Agreement. For the purposes of applying the Federal Procurement Regulations in connection with this paragraph A and paragraphs B and C, the Comptroller of the State of New York shall be treated in the same manner as the Comptroller General of the United States.
- B. The Authority and the Department further agree to include in all their subcontracts hereunder a provision to the effect that the subcontractor agrees that the Comptroller General of the United States and the Comptroller of the State of New York, or any of their duly authorized representatives, shall, under the subcontract or Procurement Regulations, as appropriate, have access to and the right to examine any directly pertinent books, documents, papers, and records of such subcontractor, involving transactions related to the subcontract.
- C. The periods of access and examination described in A and B, above, for records which relate to litigation or the settlement of claims arising out of the performance of this Agreement, or services required by this Agreement as to which exception has been taken by the Comptroller General of the United States or the Comptroller of the State of New York, or any of their duly authorized representatives, shall continue until such appeals, litigation, claims, or exceptions have been disposed of.
- D. The Authority shall report to the Secretary promptly and in reasonable written detail, each notice or claim of patent or copyright infringement based on the performance of this Agreement of which the Authority has knowledge.
- E. In the event of any claim or suit against the Government, on account of any alleged patent or copyright infringement arising out of the performance of this Agreement or out of the use of any supplies furnished or work or services performed hereunder, the Authority shall furnish to the Government, when requested by the Secretary, all evidence and information in possession of the Authority pertaining to such suit or claim. Such evidence and information shall be furnished at the expense of the Government except where the Authority has agreed to indemnify the Government.

EXHIBIT C

WEST VALLEY PROJECT DEMONSTRATION ACT

PUBLIC LAW 96-368 [S. 2443]; October 1, 1980

WEST VALLEY DEMONSTRATION PROJECT ACT

For Legislative History of this and other Laws, see Table 1, Public Laws and Legislative History, at end of final volume

An Act to authorize the Department of Energy to carry out a high-level liquid nuclear waste management demonstration project at the Western New York Service Center in West Valley, New York.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. This Act may be cited as the "West Valley Demonstration Project Act".

SEC. 2. (a) The Secretary shall carry out, in accordance with this Act, a high level radioactive waste management demonstration project at the Western New York Service Center in West Valley, New York, for the purpose of demonstrating solidification techniques which can be used for preparing high level radioactive waste for disposal. Under the project the Secretary shall carry out the following activities:

(1) The Secretary shall solidify, in a form suitable for transportation and disposal, the high level radioactive waste at the Center by vitrification or by such other technology which the Secretary determines to be the most effective for solidification.

(2) The Secretary shall develop containers suitable for the permanent disposal of the high level radioactive waste solidified at the Center.

(3) The Secretary shall, as soon as feasible, transport, in accordance with applicable provisions of law, the waste solidified at the Center to an appropriate Federal repository for permanent disposal.

(4) The Secretary shall, in accordance with applicable licensing requirements, dispose of low level radioactive waste and transuranic waste produced by the solidification of the high level radioactive waste under the project.

(5) The Secretary shall decontaminate and decommission—

(A) the tanks and other facilities of the Center in which the high level radioactive waste solidified under the project was stored,

(B) the facilities used in the solidification of the waste, and

(C) any material and hardware used in connection with the project,

in accordance with such requirements as the Commission may prescribe.

(b) Before undertaking the project and during the fiscal year ending September 30, 1981, the Secretary shall carry out the following:

(1) The Secretary shall hold in the vicinity of the Center public hearings to inform the residents of the area in which the Center is located of the activities proposed to be undertaken under the project and to receive their comments on the project.

(2) The Secretary shall consider the various technologies available for the solidification and handling of high level radioactive waste taking into account the unique characteristics of such waste at the Center.

West Valley
Demonstration
Project Act.
42 USC 2021a
note.
42 USC 2021a
note.

Activities.

Hearings.

(3) The Secretary shall—

(A) undertake detailed engineering and cost estimates for the project.

(B) prepare a plan for the safe removal of the high level radioactive waste at the Center for the purposes of solidification and include in the plan provisions respecting the safe breaching of the tanks in which the waste is stored, operating equipment to accomplish the removal, and sluicing techniques.

(C) conduct appropriate safety analyses of the project, and

(D) prepare required environmental impact analyses of the project.

(4) The Secretary shall enter into a cooperative agreement with the State in accordance with the Federal Grant and Cooperative Agreement Act of 1977 under which the State will carry out the following:

(A) The State will make available to the Secretary the facilities of the Center and the high level radioactive waste at the Center which are necessary for the completion of the project. The facilities and the waste shall be made available without the transfer of title and for such period as may be required for completion of the project.

(B) The Secretary shall provide technical assistance in securing required license amendments.

(C) The State shall pay 10 per centum of the costs of the project, as determined by the Secretary. In determining the costs of the project, the Secretary shall consider the value of the use of the Center for the project. The State may not use Federal funds to pay its share of the cost of the project, but may use the perpetual care fund to pay such share.

(D) Submission jointly by the Department of Energy and the State of New York of an application for a licensing amendment as soon as possible with the Nuclear Regulatory Commission providing for the demonstration.

(c) Within one year from the date of the enactment of this Act, the Secretary shall enter into an agreement with the Commission to establish arrangements for review and consultation by the Commission with respect to the project: *Provided*, That review and consultation by the Commission pursuant to this subsection shall be conducted informally by the Commission and shall not include nor require formal procedures or actions by the Commission pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, or any other law. The agreement shall provide for the following:

(1) The Secretary shall submit to the Commission, for its review and comment, a plan for the solidification of the high level radioactive waste at the Center, the removal of the waste for purposes of its solidification, the preparation of the waste for disposal, and the decontamination of the facilities to be used in solidifying the waste. In preparing its comments on the plan, the Commission shall specify with precision its objections to any provision of the plan. Upon submission of a plan to the Commission, the Secretary shall publish a notice in the Federal Register of the submission of the plan and of its availability for public inspection, and, upon receipt of the comments of the Commission respecting a plan, the Secretary shall publish a notice in the Federal Register of the receipt of the comments and of the availability of the comments for public inspection. If the Secre-

41 USC 501
note.

State costs
percentage.

Licensing
amendment
application.

42 USC 2011
note.
42 USC 5801
note.

Publications
in Federal
Register.

tary does not revise the plan to meet objections specified in the comments of the Commission, the Secretary shall publish in the Federal Register a detailed statement for not so revising the plan.

(2) The Secretary shall consult with the Commission with respect to the form in which the high level radioactive waste at the Center shall be solidified and the containers to be used in the permanent disposal of such waste.

(3) The Secretary shall submit to the Commission safety analysis reports and such other information as the Commission may require to identify any danger to the public health and safety which may be presented by the project.

(4) The Secretary shall afford the Commission access to the Center to enable the Commission to monitor the activities under the project for the purpose of assuring the public health and safety.

(d) In carrying out the project, the Secretary shall consult with the Administrator of the Environmental Protection Agency, the Secretary of Transportation, the Director of the Geological Survey, and the commercial operator of the Center.

Sec. 3. (a) There are authorized to be appropriated to the Secretary for the project not more than \$5,000,000 for the fiscal year ending September 30, 1981.

(b) The total amount obligated for the project by the Secretary shall be 90 per centum of the costs of the project.

(c) The authority of the Secretary to enter into contracts under this Act shall be effective for any fiscal year only to such extent or in such amounts as are provided in advance by appropriation Acts.

Sec. 4. Not later than February 1, 1981, and on February 1 of each calendar year thereafter during the term of the project, the Secretary shall transmit to the Speaker of the House of Representatives and the President pro tempore of the Senate an up-to-date report containing a detailed description of the activities of the Secretary in carrying out the project, including agreements entered into and the costs incurred during the period reported on and the activities to be undertaken in the next fiscal year and the estimated costs thereof.

Sec. 5. (a) Other than the costs and responsibilities established by this Act for the project, nothing in this Act shall be construed as affecting any rights, obligations, or liabilities of the commercial operator of the Center, the State, or any person, as is appropriate, arising under the Atomic Energy Act of 1954 or under any other law, contract, or agreement for the operation, maintenance, or decontamination of any facility or property at the Center or for any wastes at the Center. Nothing in this Act shall be construed as affecting any applicable licensing requirement of the Atomic Energy Act of 1954 or the Energy Reorganization Act of 1974. This Act shall not apply or be extended to any facility or property at the Center which is not used in conducting the project. This Act may not be construed to expand or diminish the rights of the Federal Government.

(b) This Act does not authorize the Federal Government to acquire title to any high level radioactive waste at the Center or to the Center or any portion thereof.

Sec. 6. For purposes of this Act:

(1) The term "Secretary" means the Secretary of Energy.

(2) The term "Commission" means the Nuclear Regulatory Commission.

(3) The term "State" means the State of New York.

Reports and other information to Commission.

Consultation with EPA and others.

Appropriation authorization. 42 USC 2021a note.

Report to Speaker of House and President pro tempore of the Senate. 42 USC 2021a note.

42 USC 2021a note.

42 USC 2011 note.

42 USC 5801 note.

Definitions. 42 USC 2021a note.

(4) The term "high level radioactive waste" means the high level radioactive waste which was produced by the reprocessing at the Center of spent nuclear fuel. Such term includes both liquid wastes which are produced directly in reprocessing, dry solid material derived from such liquid waste, and such other material as the Commission designates as high level radioactive waste for purposes of protecting the public health and safety.

(5) The term "transuranic waste" means material contaminated with elements which have an atomic number greater than 92, including neptunium, plutonium, americium, and curium, and which are in concentrations greater than 10 nanocuries per gram, or in such other concentrations as the Commission may prescribe to protect the public health and safety.

(6) The term "low level radioactive waste" means radioactive waste not classified as high level radioactive waste, transuranic waste, or byproduct material as defined in section 11 e. (2) of the Atomic Energy Act of 1954.

(7) The term "project" means the project prescribed by section 2(a).

(8) The term "Center" means the Western New York Service Center in West Valley, New York.

42 USC 2014.

Approved October 1, 1980.

ATTACHMENT B
SECTION XI
RCRA UNIT SUMMARY

TABLE OF CONTENTS

1.0	INTRODUCTION	2
2.0	HIGH-LEVEL WASTE TANKS.- BACKGROUND	3
2.1	Waste Tanks: 8D-1 and 8D-2	4
2.2	Waste Tanks: 8D-3 and 8D-4	6
3.0	LIQUID WASTE TREATMENT SYSTEM.....	7
4.0	CEMENT SOLIDIFICATION SYSTEM.....	8
5.0	HIGH-LEVEL WASTE VITRIFICATION TREATMENT FACILITY	8
5.1	Melter Feed Preparation.....	9
5.2	HLW Vitrification.....	9
5.3	Canister Filling, Handling, and Storage.....	10
6.0	CONTAINER STORAGE	11
6.1	Analytical & Process Chemistry Hot Cells.....	12
6.2	LAG Storage Building	12
6.3	Chemical Process Cell - Waste Storage Area	12
6.4	LAG Storage Addition #1	13
6.5	LAG Storage Addition #2	14
6.6	LAG Storage Addition #3	14
6.7	LAG Storage Addition #4	14
6.8	Interim Waste Storage Facility	16
6.9	Hazardous Waste Storage Lockers #1-4	16
6.10	High-Integrity Container Storage Area.....	17
6.11	Contact Size-Reduction Facility	18
7.0	CONTAINMENT BUILDINGS.....	18
7.1	Remote-Handled Waste Facility	19
7.2	Vitrification Cell	20
7.3	High-Level Waste Interim Storage Facility.....	21

LIST OF TABLES

Table 1	RCRA Part A Permit Application Interim Status Unit Summary
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RCRA UNIT SUMMARY

1.0 INTRODUCTION

With completion of the vitrification activities and lay-up of the high-level waste (HLW) tanks, as well as identification of potential future site activities, the West Valley Demonstration Project (WVDP) interim status units have been re-evaluated in this revision of the Resource Conservation and Recovery Act (RCRA) Part A Permit application. As such, it has been determined that this revision of the RCRA Part A Permit application better reflects the relationships of existing interim status units and allow for a clearer pathway toward achieving final closure of the WVDP.

One interim status unit that was closely evaluated was the Integrated Radioactive Waste Treatment System (IRTS), which has been permitted for tank treatment since 1993. This system was originally defined as being composed of three individual and discrete component systems including: the Supernatant Treatment System (STS), the Liquid Waste Treatment System (LWTS), and the Cement Solidification System (CSS). The IRTS was specifically designed and constructed to support the processing and pretreatment of HLW. With the completion of vitrification activities in September 2002 and isolation of tanks 8D-1 and 8D-2, as well as the STS in July 2003, the IRTS may be used to support decontamination and decommissioning (D&D) of high-activity mixed waste streams. Therefore, each component system was re-evaluated for this permit revision. It has been concluded that the STS system is best presented as ancillary equipment to tank 8D-1, since the STS is primarily, physically located within this tank. In addition, in the June 2001 RCRA Part A Permit application, tank 8D-1 was identified with both the tank storage (S02) and tank process (T01) codes, and could therefore accommodate the inclusion of the STS within this tank system, without changes to the permitting status. The LWTS is identified with the tank storage (S02) and tank process (T01) codes and the CSS is identified with the tank process (T01) code.

The Vitrification Facility was also reviewed as part of this permit revision process. It was determined that the units (Analytical & Process Chemistry [A&PC] Hot Cells, High-Level Waste Interim Status [HLWIS] Facility, and Vitrification Cell) that comprise this interim status unit are best identified as individual interim status units in this permit revision. Therefore, in this permit application, the A&PC Hot Cells are described as a container storage (S01) unit, while the HLWIS Facility and Vitrification Cell are identified for container storage (S01), as well as adding containment building storage (S06) and containment building treatment (T94) to support potential future D&D needs.

As indicated in the RCRA Part A Permit application, there are 24 regulated units at the WVDP. Most of these regulated units are assigned multiple process codes specific to the activities performed at a unit. Table 1 in this document presents each regulated unit and identifies the process code or codes associated with each specific unit.

A summary of each interim status unit, as it relates to this permit revision is provided in the following sections.

2.0 HIGH-LEVEL WASTE TANKS - BACKGROUND

There are four below-grade high-level waste tanks at the West Valley Demonstration Project (WVDP) that are or were used to treat and store liquid mixed high-level radioactive waste (HLW). For each of the two tank types an identical tank is available to provide backup capacity should the primary tanks fail.

There were two types of liquid HLW generated by Nuclear Fuel Services, Inc. (NFS) during plant operations (1966–1972): plutonium uranium reduction extraction (PUREX) and thorium reduction extraction (THOREX) waste. The PUREX wastes were HLWs separated from uranium and plutonium by solvent extraction using the PUREX process. In this process, nuclear fuel was leached from its cladding with hot nitric acid. The solution was then subjected to solvent extraction, using an n-dodecane and tributyl phosphate (TBP)-based solvent to separate the uranium and plutonium from the fission products, which remained in the aqueous phase. The PUREX wastes were contained in carbon steel tank 8D-2, necessitating neutralization for corrosion control. The neutralization resulted in a two-phased, highly radioactive PUREX waste: a supernatant (essentially saturated solution of sodium nitrate) and a sludge (primarily metal hydroxides).

The THOREX waste was generated from a single reprocessing campaign of thorium-enriched uranium fuel. The fuel was dissolved in nitric acid with 0.05 Molar (M) fluoride and 0.1 M boric acid. The resulting acidic HLW was stored in stainless steel tank 8D-4.

To prepare the PUREX waste for vitrification, the PUREX supernatant was decanted and processed through the WVDP's pretreatment system (i.e., Integrated Radioactive Waste Treatment System [IRTS]) to remove the cesium and convert the resulting low-level fraction into a cemented waste form. The remaining sludge in tank 8D-2 was then washed twice to suspend sulfate salts from the sludge phase to the liquid phase. The wash solutions were also decanted and processed through IRTS. Following the second wash, the THOREX waste was transferred from tank 8D-4 to tank 8D-2 where it was neutralized and then the resultant PUREX/THOREX waste was washed once. The PUREX/THOREX waste wash solution was then decanted and processed through the IRTS. Following the PUREX/THOREX wash processing, the spent (cesium-loaded) ion-exchange media from tank 8D-1 was transferred into tank 8D-2. The blended PUREX/THOREX sludge and spent ion-exchange media in tank 8D-2 was first transferred to the Vitrification Facility beginning in mid-1996 (see Section 5.0). Vitrification of the HLW from tank 8D-2 was completed in 2002.

2.1 Waste Tanks: 8D-1 and 8D-2

Hazardous Waste Management Units: 2
Description Codes: (T01)(S02)

Each tank rests on a 12-inch (30.5-centimeter [cm]) layer of perlite blocks, which in turn, is supported by a 3-inch (7.6-cm) layer of pea gravel contained in a carbon steel pan. The pan rests on a second 3-inch layer of pea gravel on the vault floor. The vault pad is 27 inches (69 cm) thick, except for a thick ring under the columns that support the vault roof. The vault pad rests on a 4-inch (10-cm) leveling slab. Under the concrete vault is 4 feet of gravel that is saturated with water, which prevents distortion of the silty till. The gravel bed is penetrated by five 8-inch-diameter (20-cm) standpipes that allow for monitoring around each of the two underground vaults. A dewatering well is located between the two tank vaults that is sampled and pumped to control the groundwater table in the area, as necessary. Sampling of this dewatering well provides a leak detection method for the HLW tank system. The pan and vault are equipped with leak detection and equipment to transfer liquid to the spare tank.

The vault roof is supported by six concrete columns contained in 30-inch-diameter (76-cm) steel pipes. These columns penetrate the tank 16 feet (4.9 m) from the tank center. The concrete columns pass through 4-foot-diameter (1.2-m) steel tubes welded to the top and bottom of the tank, leaving a 9-inch (23-cm) annular air space around each column. The vault roof, made of 24-inch-thick (61-cm) concrete, was poured integrally as one continuous roof slab and is located over the concrete columns.

Tanks 8D-1 and 8D-2 were identically constructed and have similar instrumentation. The tanks are 70 feet (21 m) in diameter and 27 feet (8.2 m) high. They have a nominal capacity of 750,000 gallons (2,834,059 liters [L]). The tanks are made of carbon steel plate with a thickness of at least 0.5 inches (1.3 cm) for the sides and bottom and 0.4 inches (1 cm) for the roof. The design corrosion allowance is 0.25 inches (0.6 cm) at a specific gravity of approximately 1.6. The tanks were designed for a maximum working volume of 600,000 gallons (2,271,247 L). There is an annular air space of 30 inches (76.2 cm) between the walls of the tank and the vault. Tanks 8D-1 and 8D-2 were used as process tanks in the IRTS and sludge washing processes. RCRA nonhazardous cesium-saturated zeolite generated during the IRTS processing campaigns (see Section 2.0) was stored in tank 8D-1 until 1995 and 1996 when it was blended with the PUREX/THOREX sludge in tank 8D-2. Tank 8D-2 functioned as a waste feed tank during vitrification operations. Tanks 8D-1 and 8D-2 currently contain residual mixed waste and function as storage tanks.

As vitrification processes progressed, the waste composition remaining in tanks 8D-1 and 8D-2 resulted in an increasing concentration of sodium salts to remaining radioactivity. These salts hindered the vitrification efficiency. This

liquid was stored in tank 8D-1 so as not to dilute the HLW transfers from 8D-2 to the Vitrification Facility. The sodium-laden supernatant required stabilization in a process other than vitrification (see Section 2.0).

The sodium-bearing supernatant was concentrated into sodium-bearing waste (SBW). The SBW was treated/stabilized with Portland cement and additive mixtures. Processing of the SBW was completed in November 2004, thus ending storage activities within these units. Tanks 8D-1 and 8D-2 (including the Supernatant Treatment System [STS] [see Section 2.0]) were isolated in July 2003 by flushing followed by the separation and capping of piping and/or blanking of valves. Concurrent with the isolation of these units, grout was strategically injected into the surficial soil around tank 8D-2 to limit the potential infiltration of groundwater into the tank containment vault. As of May 4, 2005, a heel of 12,384 gallons (46,879 L) remains in tank 8D-1 and a heel of 4,562 gallons (17,269 L) remains in tank 8D-2.

2.1.1 Supernatant Treatment System

The STS is a zeolite-based ion-sorption system designed to strip cesium, plutonium, and strontium from the PUREX supernatant and sludge wash solutions. The system is installed in waste tank 8D-1. This system has four ion-exchange columns (i.e., C-001 through C-004) and is designed to pass the waste solution through any three columns in series while the fourth is emptied and refilled with zeolite. Processing PUREX supernatant and sludge wash solutions through the STS involved the following steps:

A. Supernatant and Sludge Wash Mobilization and Transfer

A vertical turbine pump in tank 8D-2 was used to decant and transfer the liquid through a pre-filter to the STS collection tank, 50-D-001. Alternatively, when tank 8D-1 was used to store excess liquid, an identical pump in tank 8D-1 was used to feed the STS process. In this case, the pre-filter was bypassed and the liquid was sent directly into the 50-D-001 feed tank.

B. Supernatant and Sludge Wash Filtering and Cooling

The filtered tank 8D-2 or 8D-1 solutions were cooled to approximately 6°C and occasionally diluted with demineralized water to optimize cesium-137 removal.

C. Ion Exchange

Following filtration and cooling, the liquid wastes passed through ion-exchange columns containing zeolite. The majority of cesium,

plutonium, and strontium dissolved in solution were adsorbed onto the zeolite.

D. Decontaminated Supernatant Collection and Transfer

Following ion-exchange, the decontaminated solutions were filtered in tank 50-F-002 to remove suspended zeolite fines and collected in tank 8D-3. Following sampling, the decontaminated solution was transferred in batches to the LWTS for concentration.

E. Spent Zeolite Discharge

Columns C-001 through C-004 were valved out of the processing series when the zeolite was maximally loaded. The spent zeolite was discharged and the ion-exchange column was refilled with fresh zeolite to be used in the ion-exchange series. The discharged zeolite was held under water at the bottom of tank 8D-1 until its transfer to tank 8D-2, where it was homogenized with the PUREX/THOREX sludge and vitrified.

2.2 Waste Tanks: 8D-3 and 8D-4

Hazardous Waste Management Units: 2
Description Codes: (T01)(S02)

Waste tanks 8D-3 and 8D-4 are located in a single reinforced concrete vault with outside dimensions of 32 feet (9.8 m) by 25 feet (7.6 m). The vault is lined to a height of 18 inches (46 cm) with stainless steel, which forms a pan that is equipped with an alarmed sump.

The tanks are constructed of 304 and 304L stainless steel. They are 12 feet (3.7 m) in diameter and 16 feet (4.9 m) high. Each tank's maximum capacity is 15,000 gallons (56,781 L). The working capacity of each tank is 13,410 gallons (50,762 L). Tank 8D-3 was initially used by NFS as backup storage for tank 8D-4. It was then used by the WVDP as a process tank to receive wastes treated from the STS, and for condensate collection during vitrification. Tank 8D-3 is now used to collect waste liquid (i.e., decontamination solutions) from the Remote-Handled Waste Facility (RHWF), as necessary. Tank 8D-4 was used to store the THOREX waste during NFS operations, prior to its 1995 transfer to tank 8D-2 for vitrification. Tank 8D-4 is currently used to store residual mixed waste and decontamination liquids generated during the dismantlement of the vitrification treatment system.

3.0 LIQUID WASTE TREATMENT SYSTEM

Hazardous Waste Management Units: 1

Description Codes: (T01)(T04)(S02)

The Liquid Waste Treatment System (LWTS) is installed in several decontaminated cells inside the Process Building, as described below. The system processes the liquid waste previously treated in the STS. These waste streams are processed through an evaporator and concentrated to approximately 20–40 weight % solids. Between 1988 and 1995, the concentrates were sent to the CSS for stabilization in Portland cement. Since 1996, the LWTS has been operated to volume reduce the excess liquid processed through the STS as noted above and in Section 1.2. The distillates generated from the evaporator are treated in an LWTS zeolite ion-exchanger and are discharged to the State Pollutant Discharge Elimination System-permitted Low-Level Waste Treatment Facility (LLWTF).

After completion of the vitrification campaign, sodium-laden supernatant that remained in tanks 8D-1 and 8D-2 was pretreated in the STS and then volume reduced in the LWTS evaporator to create SBW. Post-vitrification operation of the LWTS evaporator is anticipated to volume-reduce wastes generated from decontamination and decommissioning activities in the Main Plant and Vitrification Facility, as well as liquid waste generated by the RHWF activities.

The LWTS was installed in the Liquid Waste Cell (LWC) Uranium, Product Cell (UPC), Extraction Cell (XC) #3, and the Product Purification Cell (PPC). The LWC is an “L-shaped” area that is approximately 47 feet (14 m) by 17 feet (5.2 m) in the north-south direction and 19 feet (5.8 m) by 16 feet (4.9 m) in the east-west direction. The walls and floors are constructed of reinforced concrete, which are lined with stainless steel to a height of 18 inches (46 cm). The remaining walls are coated with an epoxy-based paint. Tanks 3D-2 (1,000 gallons [3,785 L]), 7D-2 (8,510 gallons [32,214 L]), 7D-14 (520 gallons [1,968 L]), and tank 13D-8 (680 gallons [2,574 L]) are located in this cell.

The UPC is a 26.5-foot-wide (8.1-m) by 39-foot-long (12-m) by 13-foot-high (4.0-m) reinforced concrete cell located on the first floor on the southeast corner of the Process Building. The floor and walls are constructed with a welded stainless steel liner to a height of 18 inches (46 cm). The remaining walls are coated with an epoxy-based paint. Tank 5D-15B is a 15,000-gallon (56,781-L), 304L stainless steel storage tank. During STS operations, tank 5D-15B was the feed tank for the LWTS evaporator. During vitrification operations, tank 5D-15B received off-gas condensate from the melter-feed preparation. During the SBW campaign, tank 5D-15B received pretreated the sodium-laden supernatant solution for concentration.

Tanks 5D-15A1 and 5D-15A2 are compartmentalized portions of one tank located in the UPC. The tank is constructed of 304L stainless steel and has a total volume of 15,000 gallons (56,781 L). Tank 5D-15A1 has a capacity of 10,000 gallons (37,854 L) and tank 5D-15A2 has a capacity of 5,000 gallons (18,927 L). During IRTS operations, tanks 5D-

15A1 and 5D-15A2 are called the LWTS concentrates hold tanks and they receive the LWTS evaporator concentrates.

XC #3 is a 15-foot-wide (4.6-m) by 21.25-foot-long (6.5-m) by 57-foot-high (17.4-m) reinforced concrete cell located at the south end of the Process Building. XC #3 contains the LWTS high-efficiency evaporator 31017 (1,500 gallons [5,678 L]), distillate surge tank D-005 (1,000 gallons [3,785 L]), and the zeolite ion-exchanger D-003 (480 gallons [1,817 L]). The floor and walls are constructed with a welded stainless steel liner to a height of 18 inches (46 cm). The remaining walls are covered with epoxy-based paint.

4.0 CEMENT SOLIDIFICATION SYSTEM

Hazardous Waste Management Units: 1
Description Codes: (T01)(T04)

The Cement Solidification System (CSS) is located in the 01-14 Building. The original radioactive operations of the CSS were confined to three areas of the building: the Waste Dispensing Cell (WDC), the Process Room, and the filled Drum Storage and Loadout Area.

During sludge washing activities prior to 1996, liquid wastes concentrated in the LWTS were transferred to the CSS and stored in the 500-gallon (1,893-L) Waste Dispensing Vessel (tank 70-D-001) prior to feeding to the cement mixers. The Process Room contains the dispensing pump and two high-shear mixers that mixed the low-level radioactive waste (LLW) with cement and chemical additives. Additional equipment in the Process Room capped and surveyed the drums to assure that no external contamination existed. The cement drums were remotely staged and loaded onto a shielded vehicle for transport to the RTS Drum Cell for storage.

From the completion of sludge wash processing in mid-1995 to 2004, the CSS was inactive. In 2004, components of the CSS, primarily the Drum Storage and Loadout Area, were used to process SBW. A vendor-supplied portable container treatment system was used to treat the SBW within individual containers, which were then sealed for on-site storage. The CSS will continue to support D&D activities through the use of vendor-supplied portable treatment systems to solidify high-activity mixed waste streams.

5.0 HIGH-LEVEL WASTE VITRIFICATION TREATMENT FACILITY

Hazardous Waste Management Units: 1
Description Code: (T04)

The purpose of the vitrification treatment system was to solidify, into borosilicate glass, the majority of the radioactive constituents in the HLW generated during NFS operations. Following vitrification, the solidified waste has been stored on site and will be shipped to a federal HLW repository once available.

Solidification of the HLW took place within the Vitrification Facility, which is located between the HLW Tank Farm and the existing Main Plant. The primary vitrification process occurred in a shielded cell (i.e., Vitrification Cell) within the facility.

The vitrification treatment system was composed of batch make-up and holding vessels, a melter, off-gas collection and treatment, and supporting equipment. The major functions of the vitrification treatment system were:

- Melter feed preparation
- HLW vitrification
- Canister filling, handling, and storage.

5.1 Melter Feed Preparation

Melter feed preparation consisted of those processes necessary to prepare the HLW, glass formers, and other additives for introduction into the Slurry-Fed Ceramic Melter (SFCM) for vitrification. The homogenized HLW waste mixture was transferred from tank 8D-2 to the Concentrator Feed Makeup Tank (CFMT) in the Vitrification Cell. Once transferred, nitric acid and glass formers were added.

The CFMT was the first vessel in the vitrification system and was the primary station for melter feed preparation. As such, it was the main receiver of all chemical process constituents. These constituents first included HLW from tank 8D-2, recycled liquids from the Submerged Bed Scrubber (SBS), and liquid recycle streams from the canister decontamination process. Following sampling and analysis, a recipe for chemical addition was prepared, the CFMT contents were concentrated, and the glass-forming chemicals were added. The glass-forming elements were principally silicon, boron, and sodium to which small amounts of glass modifiers may have been added. The resultant mixture was transferred to the Melter Feed Hold Tank (MFHT) and then to the SFCM where it was vitrified to meet Land Disposal Restrictions (LDR) Best Demonstrated Available Technology (BDAT) standards for mixed HLW.

Post vitrification, the CFMT was used as an evaporator to support inventory control for dilute waste streams being accumulated by tank and equipment flushing.

5.2 HLW Vitrification

The HLW was vitrified with the SFCM. The SFCM was the core of the vitrification system and operated on the same principal as a large number of commercial electric melters in the glass industry. Molten glass was contained within a cavity formed by a highly corrosion-resistant refractory (Monofrax K-3). The entire refractory assembly was encased in a highly corrosion-resistant Inconel

shell. The glass was uniformly heated by passing an alternating current between three electrodes in contact with the molten glass.

In the melter cavity, the feed slurry was normally separated from the molten glass by a crust of dried and calcined waste solids called the cold cap, which usually covered between 70 and 90% of the glass surface. The bulk glass was maintained in the melter cavity at between 1,150 to 1,200°C and exited the melter through the throat of the discharge section located near the bottom of the melter. Molten glass rose up a tunnel into a separate overflow chamber where it then flowed down through a trough and was poured into a receiving canister. The material was then in a state where the hazardous and radioactive constituents were immobilized as a non-leachable, nonhazardous radioactive waste form.

5.3 Canister Filling, Handling, and Storage

Filled canisters were allowed to cool before their removal from the turntable which accommodated four canisters. The turntable was a device used to position an empty canister beneath the melter pour spout and then to rotate the canister out of the way once filled with molten glass. After the filled canister cooled, it was removed from the turntable and placed at a weld station where a stainless steel lid was welded to the canister's top flange. The canister was then taken to the radiological decontamination station where it was decontaminated, followed by acid and water rinses. The lid welding and decontamination processes, as well as temporary storage of the stabilized HLW, took place within the Vitrification Cell. Canisters were loaded onto a transfer cart and moved to the High-Level Waste Interim Storage (HLWIS) Facility, which is located in the Main Plant and connected to the Vitrification Cell by a shielded tunnel. Glass canister storage is required until a federal HLW repository becomes available.

The vitrification system completed its non-radioactive testing in early 1996 and began processing HLW in July 1996. The first phase of vitrification operations was conducted between July 1996 and June 1998. More than 200 canisters were filled, effectively stabilizing approximately 84% of the HLW curies and immobilizing the hazardous constituents in a non-leachable form. Vitrification of the HLW from tank 8D-2 was completed in 2002.

D&D of equipment within the Vitrification Cell began in 2004. Initial activities included the packaging and removal of expended vitrification equipment and debris. Additional efforts included the removal of substantial components of the vitrification process; the CFMT, MFHT, SFCM, SBS, high-efficiency mist eliminators, high-efficiency particulate air filters, the canister turntable, and the melter support bridge. In July 2005, dismantlement of the vitrification treatment system was completed.

6.0 CONTAINER STORAGE

Hazardous Waste Management Units: 17
Description Code: (S01)

Hazardous Waste Management Units: 14
Description Code: (T04)

Note that the Remote-Handled Waste Facility (RHWF), Vittrification Cell, and HLWIS Facility are discussed in Section 7.0, Containment Buildings. In addition, these units have been assigned the container storage unit process code (S01) for operational flexibility and are included in the total number of container storage units identified. Being designated as containment buildings, these units are not assigned with the process code T04.

The container storage units listed below may be used, at times, for sorting, packaging, repackaging and waste sampling activities, based on the WVDP's current and future needs. Treatment in containers (T04), such as solidification or neutralization and treatment of debris, including but not limited to size reduction, hazardous waste decontamination, and stabilization, may be performed in all or some of the below-listed storage units (14) at various times. These activities will be performed in accordance with WVDP health, safety, and radiological protection policies and procedures.

- Analytical & Process Chemical (A&PC) Hot Cells
- LAG Storage Building (LSB)
- Chemical Process Cell Waste Storage Area (CPC-WSA)
- LAG Storage Addition (LSA) #1
- LSA #2
- LSA #3
- LSA #4
- Interim Waste Storage Facility (IWSF)
- Hazardous Waste Storage Locker (HWSL) #1
- HWSL #2
- HWSL #3
- HWSL #4
- High-Integrity Container (HIC) Storage Area
- Contact Size-Reduction Facility (CSRF)

The CSRF has been identified as a RCRA storage unit to support activities, such as sampling, sorting, and repackaging of radioactive mixed wastes, as required to meet the WVDP Site Treatment Plan milestones under the Federal Facility Compliance Act. LSA #1 is designated for potential future storage of hazardous/mixed wastes and debris generated during D&D activities at the WVDP.

6.1 Analytical & Process Chemistry Hot Cells

The five A&PC Hot Cells are each 6-foot-wide (1.8-m) by 6-foot-long (1.8-m) by 6.5-foot-high (2.0-m) cells located on the third floor of the Main Plant. The concrete walls are a minimum of 2 feet (0.6 m) thick. The floor and walls are lined with stainless steel to a height of 18 inches (46 cm). A floor drain is present in each hot cell that gravity drains to tank 7D-14, which has a capacity of 520 gallons (1,968 L).

A container storage code was added to the RCRA Part A Permit for A&PC Hot Cells in June 2001 to support the D&D activities within the Main Plant. The A&PC Hot Cells may be used for storage of high activity radioactive mixed wastes in small containers.

6.2 LAG Storage Building

The LSB is a pre-engineered metal structure (Butler Building) supported by a clear span frame and anchored to a 140-foot-long (43-m) by 60-foot-wide (18-m) concrete slab foundation. A 4-inch-high (10-cm) concrete curb encloses the inner perimeter. The concrete slab is 10 inches (25 cm) thick at its high point and slopes downward on all sides to a thickness of 8 inches (20 cm).

The building is located approximately 400 feet (122 m) to the north of the Main Plant. The eave height of the building is 15.7 feet (4.8 m). The roof is sloped with the height of the center ridge being 17 feet (5.2 m). Seven continuous ventilators with dampers (chain-operated) are located on top of the building.

The siding, roofing, gutters and downspouts are constructed of 26 gauge steel. Three 18-gauge steel personnel doors are located around the building. Two 22-gauge metal roll-form slat rollup doors are located at the south and east ends of the building.

The interior walls and ceiling are equipped with 4-inch-thick (10-cm) fiberglass insulation containing a light duty vinyl/scrim/foil laminate. The flame spread rating of the laminate is 20, thus making it a Class A insulation. The building is designed to withstand a snow load of 40 pounds per square foot (lbs/ft²) and a wind velocity of 100 miles per hour (mph). The building was constructed in 1984 and is used for transuranic, LLW, and mixed LLW storage. An adjacent speed space was converted to a Sample Storage and Packaging Facility in 1999 for ease of ongoing operations.

6.3 Chemical Process Cell - Waste Storage Area

The CPC-WSA consists of a 200-foot-long (61-m) by 70-foot-wide (21 m) by 30-foot-high (9.1 m) arched, 12-gauge galvanized steel-panel enclosure. The floor of the CPC-WSA is a compacted gravel pad. The storage area inside this structure

measures 50 feet (15 m) wide by 188 feet (57 m) long by 24 feet (7.3 m) high. The CPC wastes are contained in 22 separate sealed boxes. These boxes meet the DOT requirements for “strong and tight” packages. Due to the radiation exposure levels, the boxes are shielded by hexagonally shaped concrete overpacks that are filled with high-density, low dose-rate drums providing additional shielding. Each hexagonal container measures approximately 7 feet (2.1 m) across the flats by 10 feet (3.0 m) high. Each hexagonal storage module contains up to 21 drums of waste of cement-stabilized sludge from the LLWTF, LLW contaminated debris, mixed waste, or clean soil, sand, and/or gravel to enhance the shielding capabilities of the concrete overpacks. An additional 13 sealed boxes are stored at the northeast and southwest ends of the storage array.

The boxes stored in the CPC-WSA contain process vessels, pipes, jumpers, and debris removed from the CPC during D&D operations. The vast majority of this material is stainless steel contaminated with residues from fuel reprocessing activities. The material removed from the CPC produces an appreciable contact exposure rate. Prior to packaging, the large equipment was steam sprayed to remove gross contamination.

Waste contained in the CPC-WSA is currently being processed through the RHWF, where it will be classified, repackaged and prepared for disposal.

6.4 LAG Storage Addition #1

LSA #1 is a pre-engineered frame and fabric enclosure 23 feet (7.0 m) high that covers an area 191 feet (58 m) long by 55 feet (17 m) wide. The useable area is 170 feet (52 m) long by 37 feet (11 m) wide and 14 feet (4.3 m) high. The weather structure is constructed using a hot-dipped galvanized steel frame that meets American Society for Testing and Materials (ASTM) 123. The fabric is a vinyl-coated polyester that is flame-resistant and self-extinguishing. The structure will support a snow load of 30 lbs/ft² and will withstand a wind velocity of 100 mph. The floor surface of LSA #1 consists of leveled, compacted, fine gravel. A 22-gauge metal roll-form slat rollup door (14 feet [4.3 m] high by 12 feet [3.7 m] wide) is located at the south end of the structure. Three 18-gauge steel personnel access doors (3 feet [0.9 m] wide by 7 feet [2.1 m] high) on the north, south and east side of the structure are equipped with panic bars. The structure is unheated and has 10 continuous dampers located at the top of the span. LSA #1 was built in 1987.

LSA #1 is intended for storage and treatment of LLW and mixed waste containers of debris and soil generated mainly during D&D activities. To date, LSA #1 has not been used to store mixed wastes.

6.5 LAG Storage Addition #2

LSA #2 is a hardstand that covers an area of 275 feet (84 m) long by 75 feet (23 m) wide that tapers to a width of 30 feet (9.1 m) at a distance of approximately 215 feet (66 m). The surface of LSA #2 consists of leveled, compacted, fine gravel. LSA #2 has been used as an empty container and non-liquid LLW storage hardstand. Shielded mixed waste is also stored at LSA #2.

LSA #2 is intended for storage and treatment of non-liquid LLW and mixed waste containers of debris and soil generated mainly during D&D activities.

6.6 LAG Storage Addition #3

LSA #3 is a clear span structure with a pre-engineered frame and steel sheeting and covers an area of 88 feet (27 m) wide by 291 feet (89 m) long. The useable area is 80 feet (24 m) wide by 283 feet (86 m) long by 22 feet (6.7 m) high. The structure will support a snow load of 40 lbs/ft² and withstand a design wind velocity of 80 mph. A 6-inch-high (15-cm) concrete curb encloses the inner perimeter. The concrete slab is 7 inches (18 cm) thick. LSA #3 may be heated by indirect fired, natural gas furnaces, as necessary, to prevent the natural freeze-thaw cycle on stored waste.

LSA #3 has been used to store containers of LLW and mixed wastes. Containers of miscellaneous contaminated equipment, stabilized and partially stabilized drums of sludge from the LLWTF plant, contaminated soil, and stabilized resins and anthracite are stored in this unit.

6.7 LAG Storage Addition #4

LSA #4 is a clear span structure with a pre-engineered frame and steel sheeting and covers an area 291 feet (89 m) long by 88 feet (27 m) wide and 18 feet (5.5 m) high. The structure will support a snow load of 40 lbs/ft² and withstand a design wind velocity of 80 mph. LSA #4 has three rollup doors (16 feet [4.9m] wide by 14 feet [4.3 m] high) which are located at the south, east, and west side of the facility. A 6-inch-high (15-cm) concrete curb encloses the inner perimeter. The concrete slab is 7 inches (18 cm) thick. LSA #4 may be heated by indirect fired, natural gas furnaces, as necessary, to prevent the natural freeze-thaw cycle on waste. LSA #4 was built in 1991 as a fabric covered structure; it was converted to a steel covered structure in 1999.

LSA #4 is intended to store containers of LLW and mixed wastes. Containers of miscellaneous contaminated equipment, stabilized and partially stabilized drums of sludge from the LLWTF plant, contaminated soil, and stabilized resins and anthracite are stored in this unit.

A Shipping Depot, integral to LSA #4, was constructed to receive standard, flatbed tractor-trailer rigs into the building such that the loading bed of the trailer is level with the floor. The Shipping Depot is designed to permit loading of containers by fork trucks driving onto the loading dock of the trailer. The depot is connected to the on-site road system by a paved drive, allowing easy access for trucks backing into the dock area. A covered connection was constructed between LSA #3 and LSA #4 to facilitate container movements. The Shipping Depot is also used for the sorting of LLW and can be used to store LLW and mixed waste containers.

LSA #4 houses the Container Sorting and Packaging Facility (CSPF). The 40-foot-long (12-m) by 28-foot-wide (8.5-m) CSPF is a stand-alone enclosure within the LSA #4 facility. It is constructed of prefabricated, interlocking modular 22-gauge stainless steel panels that form the outside walls, ceiling, and inner partition walls. The concrete floor of LSA #4 serves as the floor of the CSPF. The CSPF consists of a waste sorting room, drum/box load-in/out rooms, and two airlocks for personnel access to and egress from the sorting room. The CSPF is used to sample (if needed), sort, segregate, and repackage LLW and mixed waste. Full drums or boxes containing sorted wastes are decontaminated, if needed, and placed back into storage in the LAG Storage units.

Next to the CSPF is a stand-alone blower room that houses the ventilation system and other components essential to sorting operations. The CSPF ventilation system consists of a 2,000-cubic-feet-per-minute (cfm) stack system with two nominal blowers that include filters. Two sections of the 6-inch-diameter (15-cm) stainless steel are connected to a Neederman Fume Extractor. One 14-inch-diameter duct is connected to a benchhood. All three exhaust ducts direct ventilated air from the blowers to a locally mounted stack. The stack penetrates the LSA #4 structure before discharging ventilation air to the atmosphere. Air ventilation is monitored through the use of continuous air monitors.

Fire protection systems in the CSPF include a Very Early Warning Smoke Detector System that detects particles during the pre-combustion stages of a fire, air duct smoke detectors in the ventilation system, and a Clean Agent Fire Suppression System. The fire alarms are monitored through the Central Site Monitoring System by means of the Data Gathering Panel and data transmission lines. Two manual fire pull stations are associated with the CSPF, one in the sorting room and the other mounted immediately outside the CSPF.

LSA #4 also houses the Waste Processing Area, which is defined by a 70-foot (21-m) by 40-foot (12-m) by 10-foot (3-m) high tent structure. The tent structure is equipped with viewing windows and load-in and load-out vestibules. Within the tent structure are two sorting stations, a floor scale, and a drum crusher. The concrete floor of LSA #4 serves as the floor of the Waste Processing Area. This area will be used to characterize legacy LLW for off-site waste disposal. The wastes processed through this area will be managed within the existing on-site

container storage units, pending off-site disposal. This area can also be used to sort, segregate, and repackage LLW, and manage mixed waste, if identified.

6.8 Interim Waste Storage Facility

The IWSF is located within the Nuclear Regulatory Commission-Licensed Disposal Area, next to the Interceptor Trench Project. The IWSF is a pre-engineered metal structure measuring approximately 35 feet (11 m) wide by 35 feet (11 m) long. It is supported by a clear span frame and anchored to a wide, bermed, concrete slab foundation. An 8-inch-high (20-cm) concrete curb frame encloses the inner perimeter. The siding, roofing, gutters, and downspouts are constructed of 26-gauge steel. Two 18-gauge steel personnel access doors are located at the northwest corner of the building. The interior walls and ceiling are equipped with 4-inch-thick (10-cm) fiberglass insulation containing a light duty vinyl/scrim/foil laminate. The flame spread rating of the laminate is 20, thus making it a Class A insulation. The building is designed to withstand a snow load of 40 lbs/ft² and a wind velocity of 100 mph. The IWSF is heated by two 15-kilowatt (51,000-British thermal unit) electric heaters to prevent natural freeze-thaw cycle. On the northeast corner of the IWSF is a metal 15-foot-long (4.6-m) by 10-foot-wide (3.0-m) 26-gauge lean-to addition with a concrete slab foundation which previously housed a fire suppression system. The fire control equipment inside the IWSF includes portable fire extinguishers.

The IWSF stores solid and liquid radiological, mixed and hazardous wastes in containers. A separate area is designated within the facility for staging wastes pending characterization/classification. The IWSF has also been used for the preparation of radiological waste shipments.

6.9 Hazardous Waste Storage Lockers #1-4

The HWSLs are pre-engineered lockers located approximately 200 feet (61 m) northwest of LSA #1 and 150 feet (46 m) west of LSA #2. Each locker is a separate unit, but identical in size and measures 8 feet (2.4 m) wide by 15 feet (4.6 m) long by 8 feet (2.4 m) high. The lockers are equipped with a spill basin beneath a steel grate floor with a capacity of 255 gallons (965.3 L) (10% of an HWSL storage capacity). They are equipped with fire suppression devices, remote and local fire alarm systems, explosion-proof electrical components, and explosion-proof vents.

The superstructure of the lockers consists of ASTM A-Grade 500-B 4-inch (10-cm) tubular steel stock for the base vertical cradle and lifting crown framework. The door openings have a vertical sub-frame of 4-inch tubular steel to prevent deflection displacement and twisting of the steel door and frame. The wall system within the 4-inch (10-cm) tubular steel interior wall panel finish is porcelain enamel steel with 20-gauge galvanized steel studs, base track, and double channel head mount components. The wall system employs a 3.5-inch (9-cm) fiberglass

insulating blanket that serves as a thermal and dust barrier and aids in humidity and noise control. This wall system rates a thermal value of R-12.

Two Underwriters Laboratory (UL)-rated fire dampeners complete with 180 degree fusible link for automatic closure in case of fire are incorporated within the wall system and prevent ventilation during a fire. A 2,500-cfm explosion-proof ventilator is provided for positive air movement. Also incorporated within the enclosure wall system are two approved 20 lbs/ft² explosion relief panels designed to relieve pressure within the building in the event of an accident. The pressure relief panels remain fully watertight under normal conditions. The roof of the lockers can support a snowload of 40 lbs/ft². The interior ceiling materials consist of a double layer of gypsum board, providing a UL classified two hour fire rating.

The fire detection/suppression system consists of a local and remote alarm system as well as a fully automatic dry chemical fire extinguishing system. The system is equipped with heat detectors, a storage cylinder control panel, nozzles, and a mutual remote override station. The HWSLs are intended to store containers of hazardous and nonhazardous wastes. In case the IWSF is closed, the HWSL will be used for storage of mixed waste, if necessary.

6.10 High-Integrity Container Storage Area

The HIC Storage Area is located 50 feet (15 m) north of the Fuel Receiving and Storage (FRS) building and approximately 100 feet (30 m) east of the Vitrification Treatment Facility. The fenced, access controlled storage area is approximately 2,000 square feet in area, and consist of a crushed stone pad. It is currently used to store HICs that contain radioactive spent filter media from the FRS pool waste water recirculation unit; one of these HICs also contains radioactive particulates recovered from the FRS pool floor. In addition to the highly radioactive wastes generated from the FRS pool cleanup and maintenance, other types of highly radioactive mixed wastes (such as spent resins) are stored in this unit.

The approximate 125-cubic-foot capacity RADLOK™ HIC is constructed of high-density, cross-linked polyethylene. Each HIC is filled and sealed in the FRS Hittman Building, the HIC is then overpacked into a SUREPAK™ container to provide for radiation shielding and secondary containment. The approximate 70,000 pound (31,752 kilogram [kg]) SUREPAK™ container is equipped with forklift cutouts for portability and is fabricated of 6,000-pounds-per-square-inch concrete reinforced with fabric and reinforcing steel designed to withstand weather and environmental exposure. Each filled 9-foot-diameter (2.7-m) by 9-foot-high (2.7-m) SUREPAK™/HIC contains approximately 100 cubic feet of very high dose rate radioactive waste and weighs approximately 77,000 pounds (34,927 kg).

6.11 Contact Size-Reduction Facility

The CSRF is approximately 25 feet (7.6 m) long by 23 feet (7.0 m) wide, located within the Master Slave Manipulator (MSM) repair shop. The CSRF is primarily used for volume reduction of large, low-dose rate (<100 millirem per hour) equipment resulting from D&D activities in the Main Plant. Large pipes and vessels are reduced in size in the CSRF by a variety of methods, including plasma-arc cutting, portable band saws, and abrasive cutting. Metal decontamination is performed by either high-pressure water spray or by liquid abrasive decontamination spray.

LLW packages to be processed in the CSRF are staged in the north airlock pending a preliminary radiation survey to verify that the dose rate is within established limits. Wastes that are determined to be acceptable for processing are then transferred to the cutting room. Following safe storage or removal of flammable material from the cutting room, equipment is size-reduced and then decontaminated, if necessary. Following decontamination, material is air-dried and transferred to an airlock for final survey before it is packed and returned to an appropriate LAG storage unit for storage pending final off-site disposition.

Ventilation for the CSRF is provided by a room ventilation system and backed up by the Head End Ventilation (HEV) System of the Main Plant. Room ventilation is provided by a system mounted on the roof of the cutting room. Room ventilation system air flows at a nominal rate of 6,000 cfm from the south MSM repair shop, vestibules, and decontamination room into the cutting room, where it is exhausted through an in-cell spark arrestor and roughing filter and a roof mounted filter train consisting of a roughing filter and two HEPA filters in series prior to discharge to a locally mounted stack. Ventilation for the MSM decontamination shower booth and liquid abrasive decontamination system decon booth/survey glove box is provided by the HEV system. The HEV also provides backup ventilation for the various rooms when the cutting room ventilation discharges to the room ventilation system.

The CRSF is also used for staging, sampling, sorting, consolidating and repackaging mixed waste containers, as required to meet the commitments and milestones under the WVDP Site Treatment Plan. Containers of mixed wastes may be stored at the CRSF while awaiting sampling and/or repackaging.

7.0 CONTAINMENT BUILDINGS

Hazardous Waste Management Units: 3
Description Codes: (S01) (S06) (T94)

The RHWF, Vitrification Cell, and the HLWIS Facility are containment buildings that have been identified with the container storage process code (S01) in the RCRA Part A Permit application. The details of these units are presented below.

7.1 Remote-Handled Waste Facility

To support completion of the WVDP mission and site closure, radioactive wastes need to be prepared for final disposition. Many of these waste streams have or will have high radiation or high surface contamination levels that require remote operations for personnel safety. Some of these wastes currently exist. Others will be generated during on-going and future Project activities, such as decontamination of the Main Plant. The RHWF was constructed to manage the existing and future waste streams. It is located northwest of the Process Building on the North Plateau, adjacent to the CPC-WSA. This containment building is a free-standing structure that is approximately 188 feet (57 m) long by 91 feet (28 m) wide. The RHWF became operational as an Interim Status containment building for treatment of radioactive and mixed waste in June 2004. The unit is being used to size reduce radioactive and mixed wastes associated with D&D activities performed at the WVDP. In addition, the RHWF can be used for container storage, if necessary, as discussed in Section E, *Load-Out Area*.

The RHWF includes a Receiving Area (Truck Bay), Buffer Cell, Work Cell, Packaging Area, Load-Out Area (Truck Bay), Operating Aisles, Office Area, Contact Maintenance Area, and additional space for expanding the facility to meet operation needs. The RHWF could be expanded, for example, to include an analytical and process chemistry laboratory, waste decontamination system, liquid waste treatment system, temporary waste storage, and/or examination equipment (e.g., transuranic waste counter, segmented gamma scanner, and/or collimated shield gamma scan). In general, the RHWF incorporates three zones of confinement, secondary containment, process ventilation and monitoring, and liquid collection and conveyance.

7.1.1 Receiving Area

Waste containers are transferred from an on-site storage facility such as the CPC-WSA and loaded into the RHWF through the Receiving Area truck bay. The Receiving Area provides weather protection while unloading waste containers from transport vehicles (e.g., shielded transport trailers, open flat-bed trailers, fork-lifts) and a secondary buffer area for ensuring the confinement of radioactive contamination. The Receiving Area houses a bridge crane to unload waste containers from transport vehicles for transfer into the Buffer Cell.

7.1.2 Buffer Cell

The Buffer Cell functions as an air lock between the Receiving Area and the Work Cell and as the means for moving waste containers into the Work Cell. Powered roller conveyers are installed in the floor of the Buffer Cell to remotely transfer waste containers from the Buffer Area to the Work Cell. The Buffer Cell also serves as a radiologically controlled

area for contact-handled operations such as over-packing or removing over-sized waste boxes from the Work Cell (e.g., when an over-sized waste package cannot be transferred through the waste transfer system).

7.1.3 Work Cell

The Work Cell serves as the primary work area for remotely handling the waste. The Work Cell includes a bridge crane equipped with a telescoping hoist and mechanical arm, as well as one wall-mounted jib crane equipped with dexterous manipulators for operating a wide range of tools for waste handling, mechanical treatment/segmenting (i.e., size-reducing and/or segregating), packaging (unpackaging, repackaging), and surveying. Controls for this equipment are installed in the Operating Aisle at two process stations and one packaging/sample station equipped with shield windows. The Work Cell also incorporates equipment for decontaminating the in-cell work surfaces, cranes, manipulators, and other waste handling equipment.

7.1.4 Packaging Area

Besides providing access to the waste transfer system, the Packaging Area functions as the work area for unloading waste packages from the RHWF. Packaged/repackaged waste containers are unloaded from the waste transfer system through the Packaging Area into the Load-Out Area.

7.1.5 Load-Out Area

Packaged/repackaged waste containers are loaded onto transport vehicles in the Load-Out Area truck bay for shipment off site or to a temporary on-site location. The waste packages are loaded onto the transport vehicles with forklifts; however, the Load-Out Area could be modified to include a gantry crane, if required to serve this purpose. The Load-Out Area serves as a third zone of confinement since the airlock design of the waste transfer system in the Packaging Area will provide the secondary buffer area. This area can be used for the storage of containers, as determined necessary, to perform site treatment, storage, and disposal activities.

7.2 Vitrification Cell

The Vitrification Cell is 34 feet (10 m) wide by 65 feet (20 m) long by 42 feet (13 m) high to the overhead crane hook. Within the Vitrification Cell is a pit that is 34 feet (10 m) wide and 14 feet (4.3 m) deep. The pit floor slopes north to a channel that leads to a sump nearly centered on the north wall. The sump is monitored with level instrumentation to detect the presence of free liquids. The pit is lined with 1/8-inch-thick (0.3-cm) stainless steel plate to contain spills. If free liquids are present, they can be evacuated via jetting for proper management. The pit area held the vessels containing radioactive slurry.

Containerized waste would be transferred into the Vitrification Cell from on-site storage areas via the Load-In Facility and the Equipment Decontamination Room (EDR) or from the Process Building through the EDR. The Vitrification Cell is serviced by a bridge crane equipped with manipulators to perform activities such as size reduction and re-packaging. Additional equipment (e.g., a BROKK demolition machine) is available for use in the Vitrification Cell to support containment building activities. The containment building treatment activities are anticipated to be performed within the stainless-steel-lined pit area. Wastes treated in the Vitrification Cell can be stored within the cell or transferred out through the EDR for storage in the HLWIS Facility or through the Load-In Facility for management in other on-site container storage units.

The non-pit area of the Vitrification Cell will be used for the storage of high dose containers, as determined necessary, to perform site treatment, storage, and disposal activities.

7.3 High-Level Waste Interim Storage Facility

The HLWIS Facility, also known as the Chemical Process Cell (CPC), served as a process cell during NFS fuel reprocessing operations. The HLWIS Facility is located on the northwest side of the Main Plant. The HLWIS Facility is 93 feet (28 m) long by 22 feet (6.7 m) wide by 43 feet (13 m) high, with 5-foot-thick (1.5-m) concrete walls. The floor and walls are lined with stainless steel to a height of 18 inches (46 cm). Two stainless-steel-lined sumps present in the HLWIS Facility are monitored with level instrumentation to detect the presence of free liquids. If free liquids are detected in a sump, they can be evacuated via jetting for proper management of accumulated liquids.

The cell now stores the vitrified HLW, vitrification expended material, process equipment removed from the Vitrification Cell during ongoing closure activities of the vitrification treatment system, and waste generated during D&D of the Head End Cells. The remaining area of the HLWIS Facility, identified as the Failed Equipment Storage Area, is approximately 28.5 feet by 22 feet. Of this area, approximately 23 feet by 22 feet can be used to perform containment building activities. An overhead crane is present to move containers in and out of this unit. The crane can be retrofitted with remotely operated manipulators and equipment to perform size reduction and re-packaging activities. Wastes managed in the HLWIS Facility would be transferred to the EDR for package screening and decontamination, as appropriate. The wastes would then be transferred to the Vitrification Cell for storage or through the Load-In Facility for transfer to other on-site container storage units.

The HLWIS Facility can be used for the storage of containers, as determined necessary, to perform site treatment, storage, and disposal activities.

TABLES

Table 1
RCRA Part A Permit Application Interim Status Unit Summary

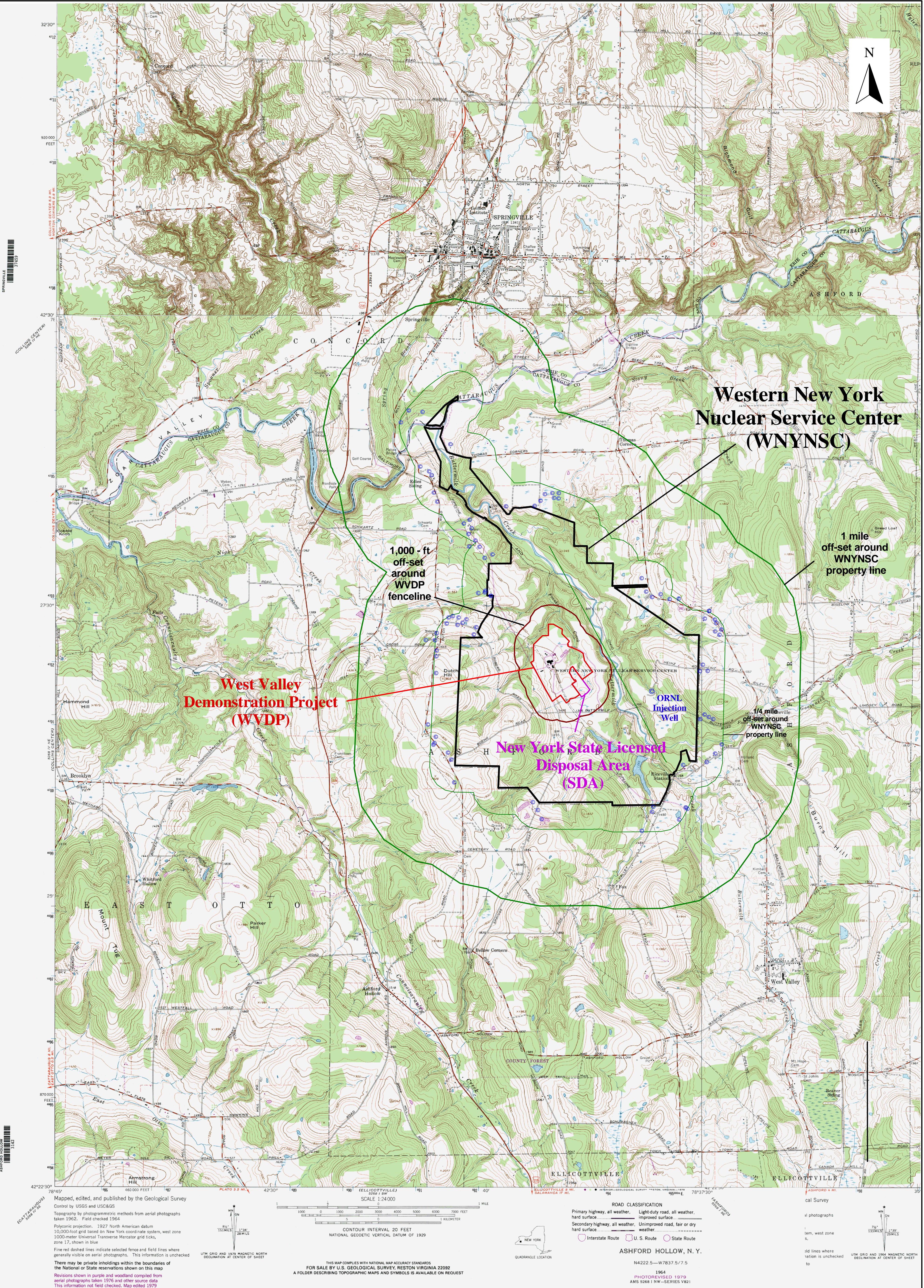
Interim Status Unit Description	S01 Container Storage	S02 Tank Storage	S06 Containment Buildings	T01 Tank Treatment	T94 Treatment in Containment Buildings	T04 Other Treatment			Section Within Attachment B, RCRA Unit Summary
						Pre-Treatment of Liquid Waste	Treatment in Containers	Treatment by Vitrification	
Tanks									Section 2.1 and Section 2.2.
1. 8D-1*		X		X					
2. 8D-2		X		X					
3. 8D-3		X		X					
4. 8D-4		X		X					
Systems									Sections 3.0, 4.0, and 5.0.
1. Liquid Waste Treatment System		X		X		X			
2. Cement Solidification System				X			X		
3. Vitrification Treatment System								X	
Container Storage Units									Section 6.0
1. A&PC Hot Cells	X						X		
2. LAG Storage Building	X						X		
3. CPC-WSA	X						X		
4. LAG Storage Addition #1	X						X		
5. LAG Storage Addition #2	X						X		
6. LAG Storage Addition #3	X						X		
7. LAG Storage Addition #4	X						X		
8. Interim Waste Storage Facility	X						X		
9. HWSL #1	X						X		
10. HWSL #2	X						X		
11. HWSL #3	X						X		
12. HWSL #4	X						X		
13. HIC Storage Area	X						X		
14. Contact Size-Reduction Facility	X						X		
Containment Buildings									Section 7.0
1. Remote-Handled Waste Facility	X		X		X				
2. Vitrification Cell	X		X		X				
3. HLWIS Facility	X		X		X				
TOTALS									
Number of Units	17	14**	3	6	3	16		1	

* The STS is primarily located within tank 8D-1, and as ancillary equipment of tank 8D-1, is defined as part of the tank 8D-1 system.

** There are 10 tanks identified as part of the Liquid Waste Treatment System interim status unit for tank storage.

ATTACHMENT C
SECTION XV

1. Site Topographic Map
2. Interim Status Treatment and Storage Units
3. Groundwater Wells and Surface Water Features



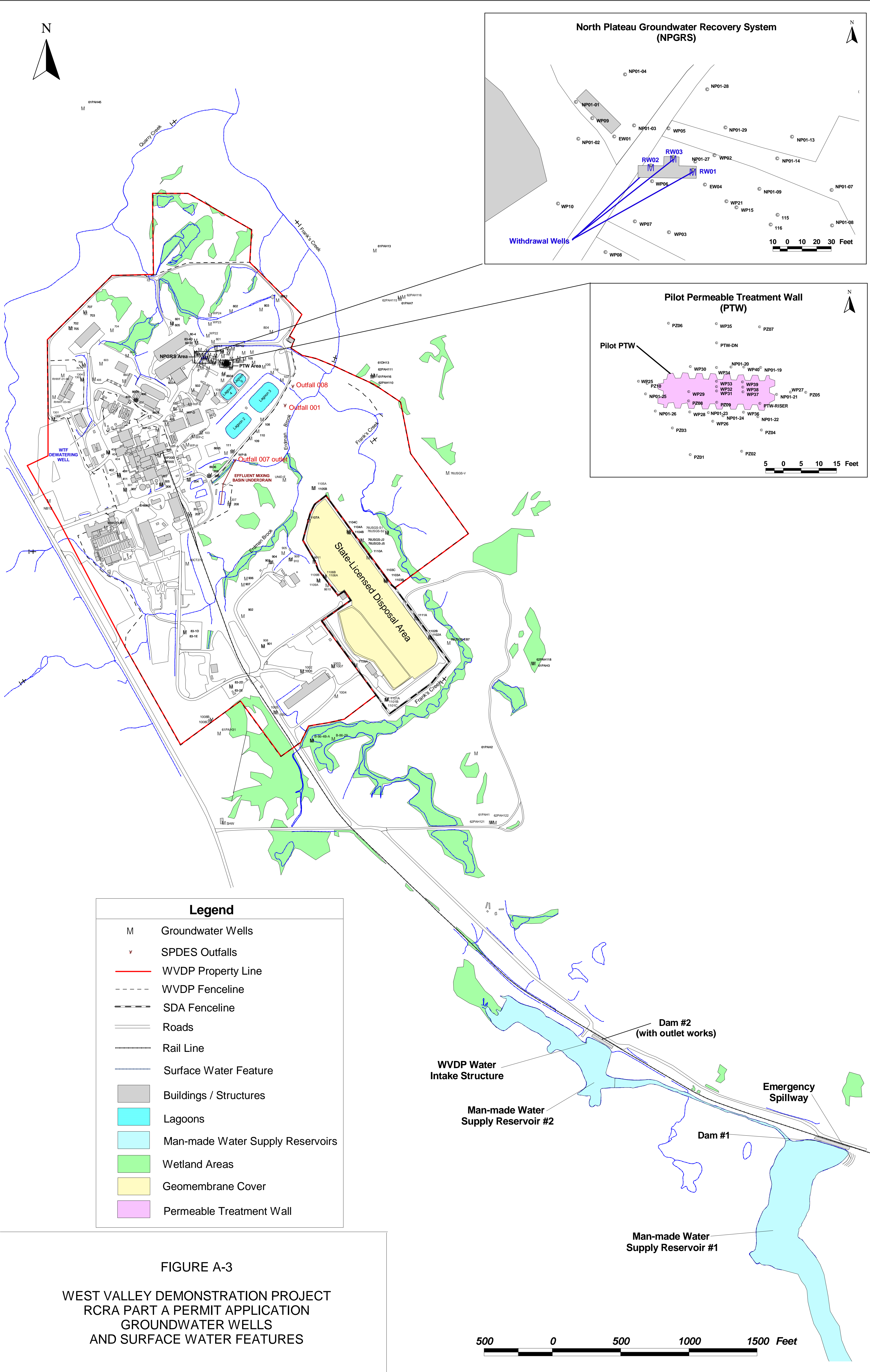
Domestic Withdrawal Wells

2000 0 2000 4000 6000 8000 Feet

1 0 1 2 Miles

FIGURE A-1

WEST VALLEY DEMONSTRATION PROJECT
RCRA PART A PERMIT APPLICATION
SITE TOPOGRAPHIC MAP
ASHFORD HOLLOW, WEST VALLEY,
SPRINGVILLE AND SARDINIA QUADRANGLES



ATTACHMENT D
SECTION XVI
FACILITY DRAWING
(11 in. x 17 in. Interim Status Treatment and Storage Units)

ATTACHMENT E
SECTION XVII
PHOTOGRAPHS

- E-1. Waste Tank Farm (HLW Tanks 8D-1, 8D-2, 8D-3, and 8D-4, and the STS)
- E-2. Main Plant Building (CSRFB, CSS, Vitrification Cell, HLWIS Facility, LWTS, LLW Tanks, and A&PC Hot Cells)
- E-3. Container Storage (LSB and LSA #1)
- E-4. Container Storage (CPC-WSA, LSA #2, and HWSLs #1–4)
- E-5. LAG Storage Addition #3 (LSA #3)
- E-6. High-Integrity Container (HIC) Storage Area
- E-7. LAG Storage Addition #4 (LSA #4) and Shipping Depot
- E-8. Interim Waste Storage Facility (IWSF)
- E-9. Remote-Handled Waste Facility (RHWF)

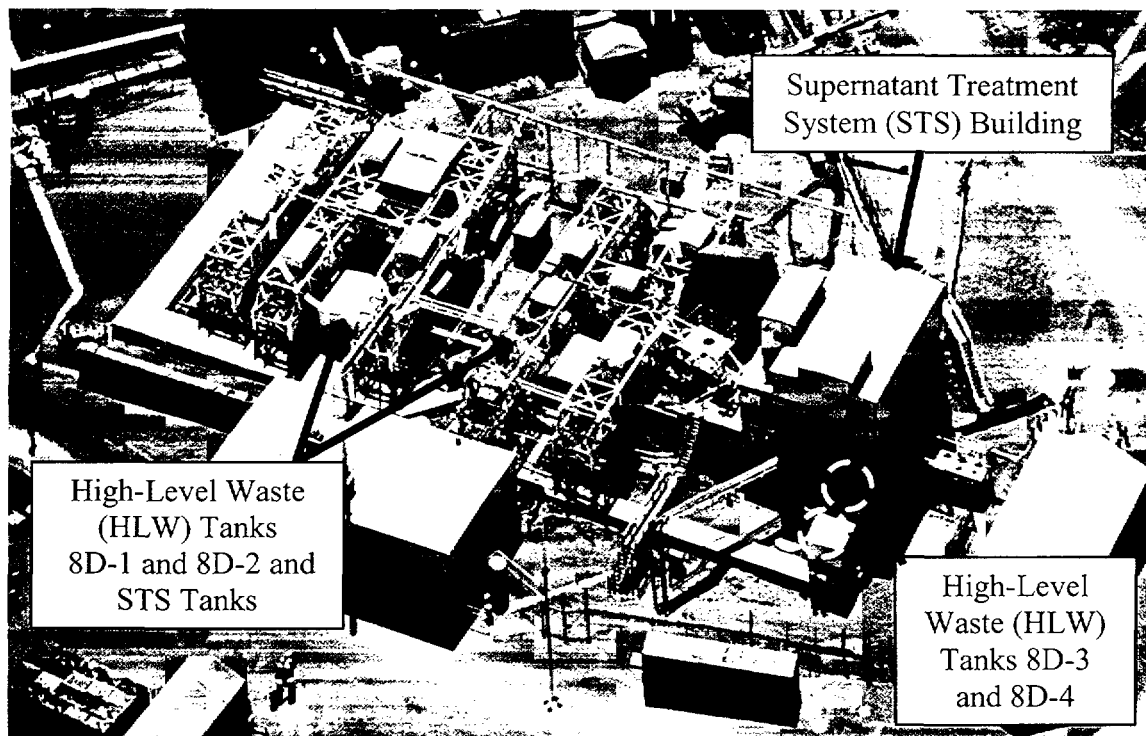


Figure E- 1: Waste Tank Farm (HLW Tanks 8D-1, 8D-2, 8D-3, and 8D-4, and the STS)

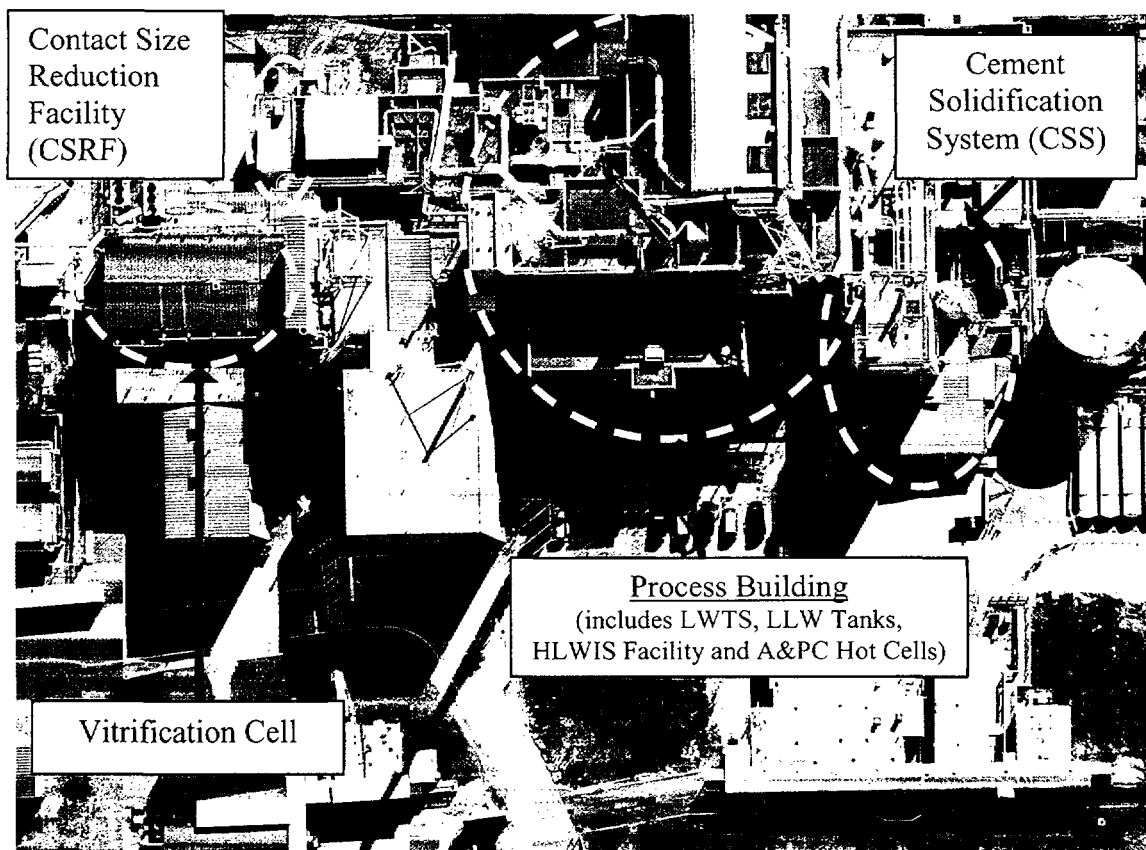


Figure E-2: Main Plant Building (CSRf, CSS, Vitrification Cell, HLWIS Facility, LWTS, LLW Tanks, and A&PC Hot Cells)

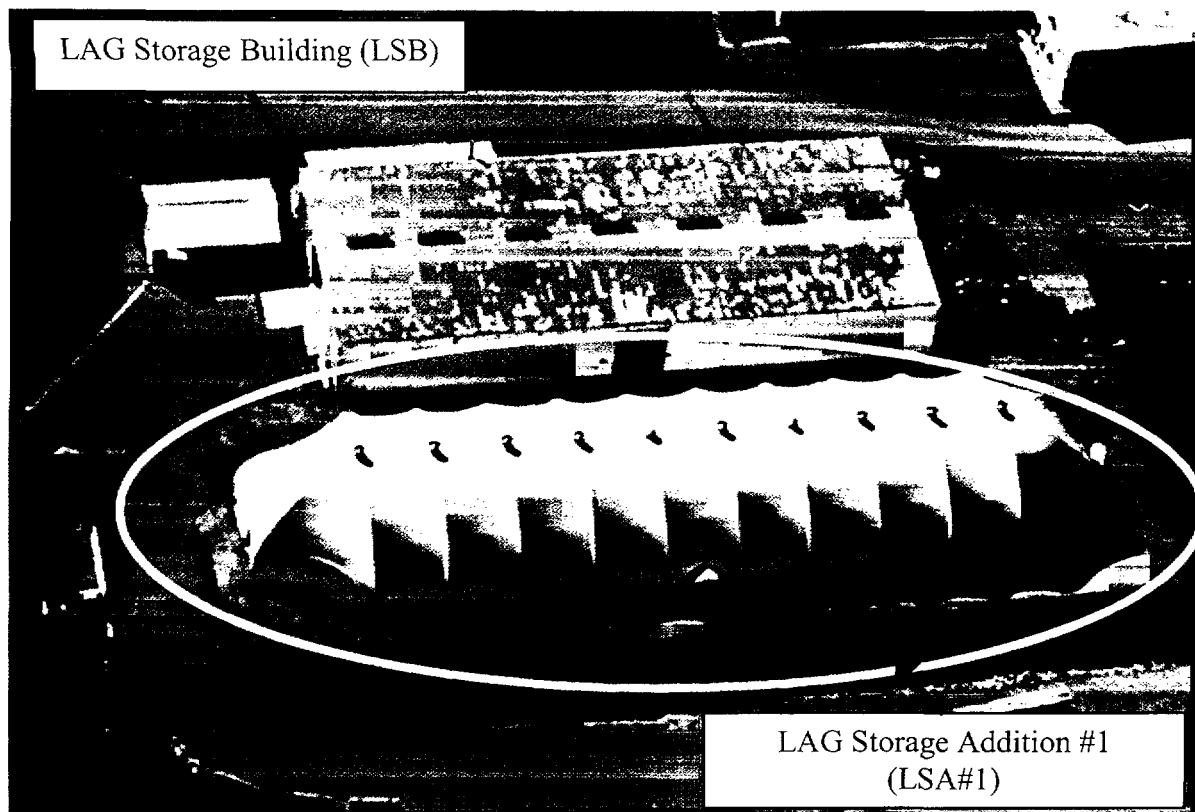


Figure E-3: Container Storage (LSB and LSA #1)

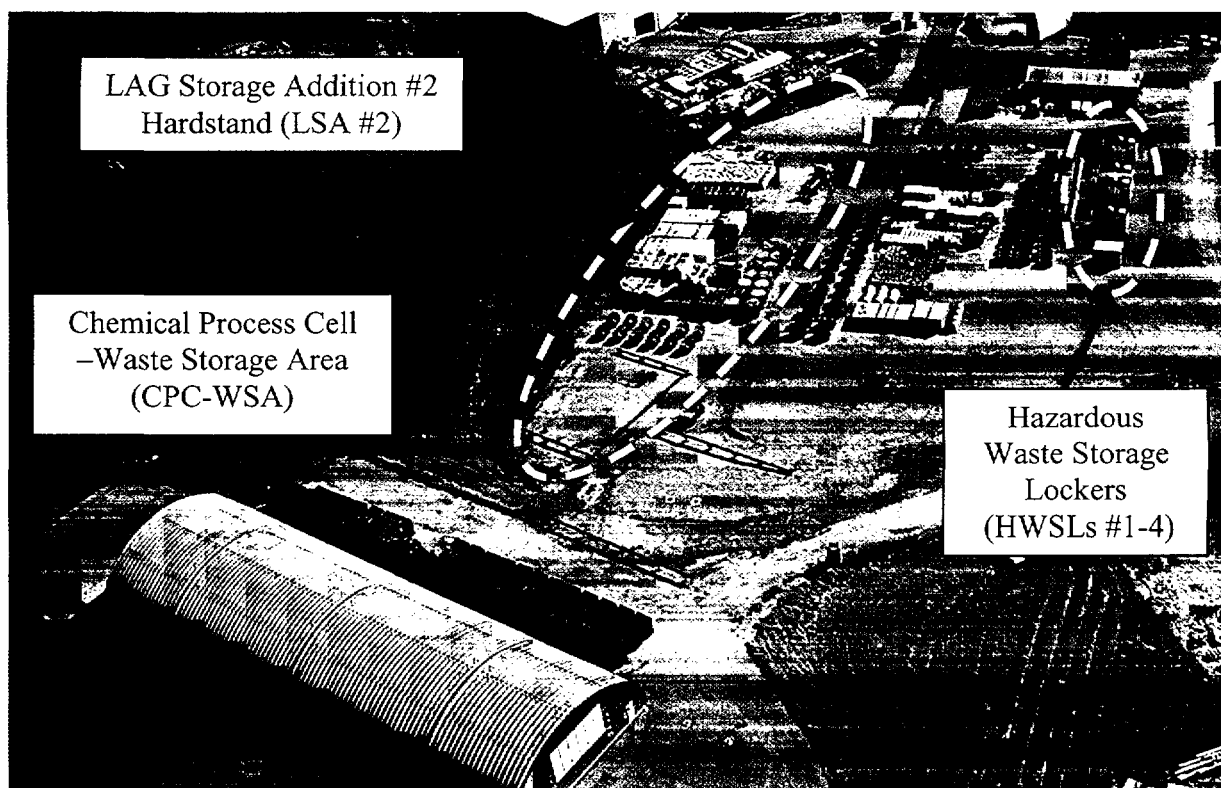
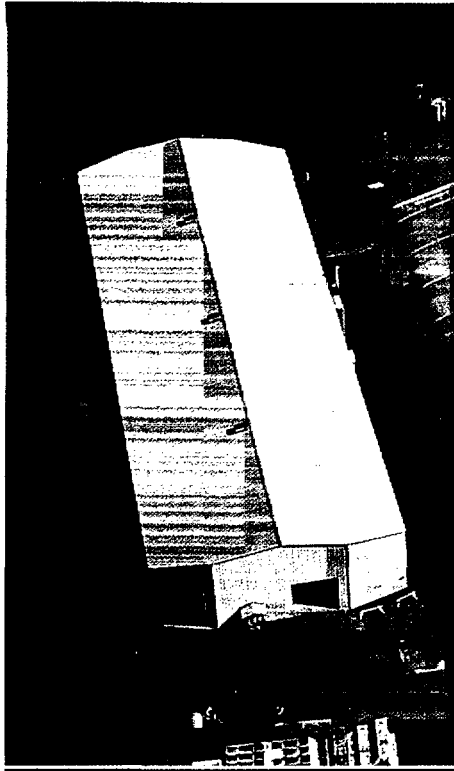
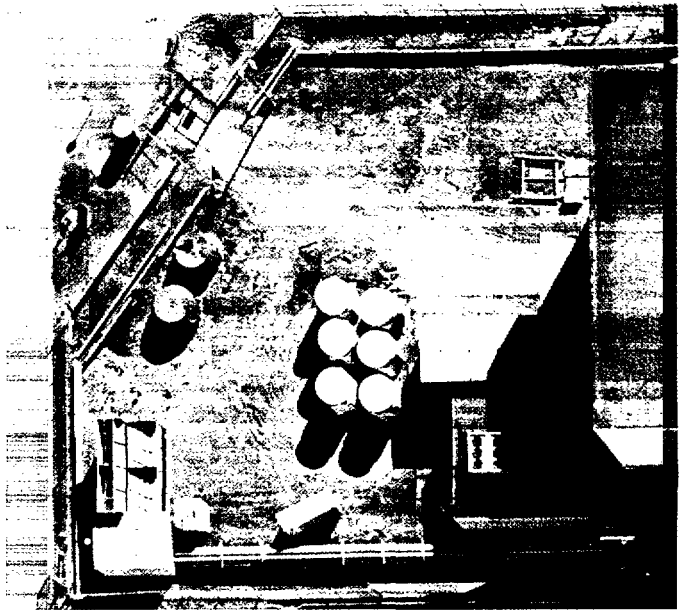


Figure E-4: Container Storage (CPC-WSA, LSA#2 and HWSLs #1-4)



**Figure E-5: LAG Storage Addition #3
(LSA #3)**



**Figure E-6: High-Integrity Container (HIC)
Storage Area**

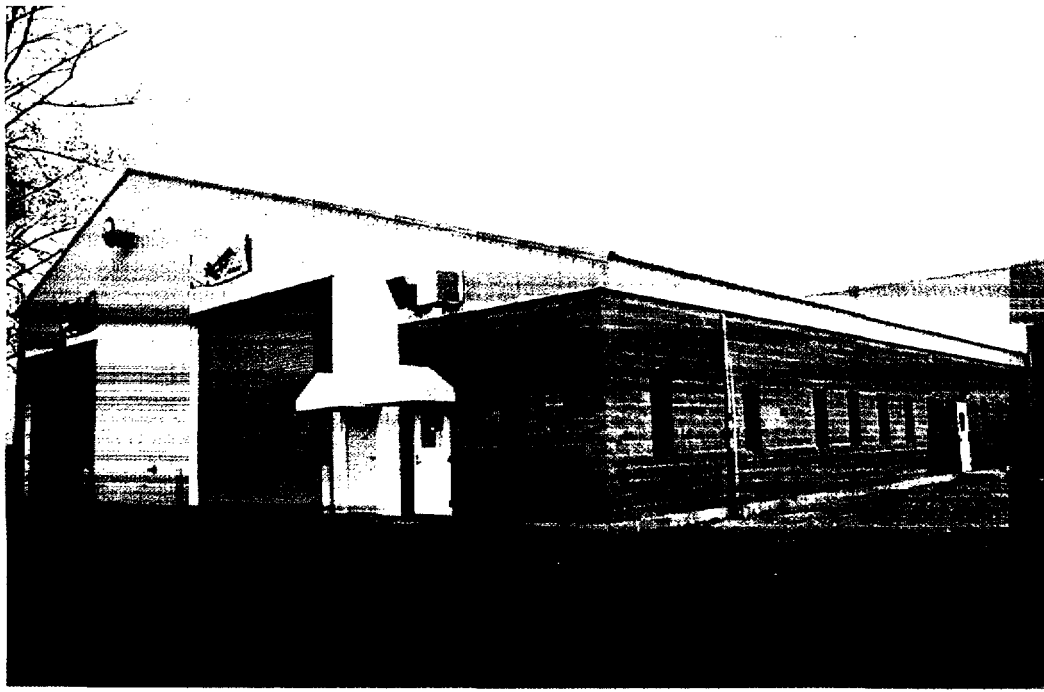


Figure E-7: LAG Storage Addition #4 (LSA #4) and Shipping Depot

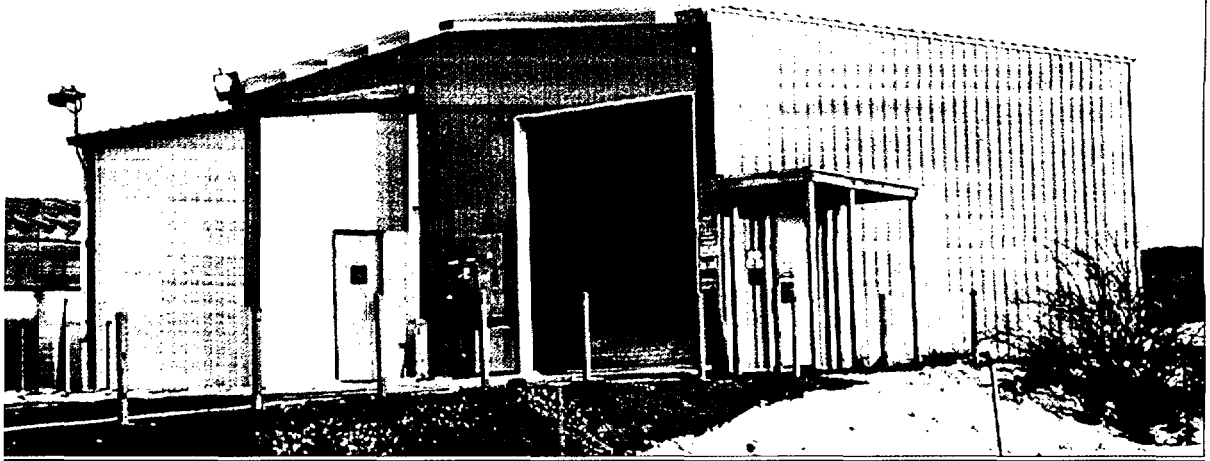


Figure E-8: Interim Waste Storage Facility (IWSF)

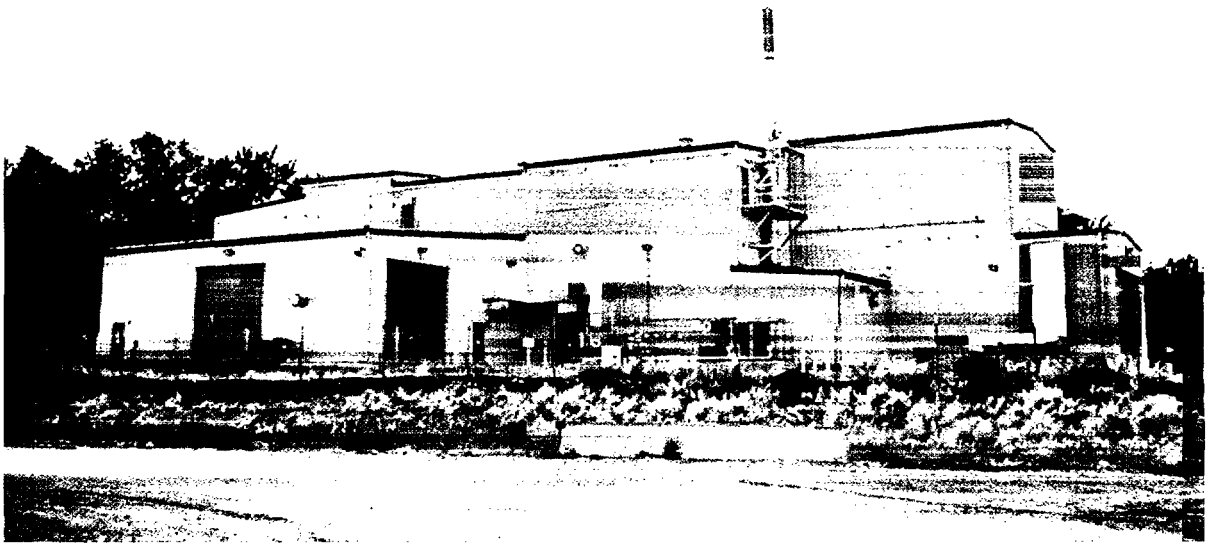


Figure E-9: Remote-Handled Waste Facility (RHWF)

ATTACHMENT C

WEST VALLEY NUCLEAR SERVICES COMPANY CERTIFICATION

WEST VALLEY NUCLEAR SERVICES CO. CERTIFICATION
(For Internal Use Only)

1. To be signed by cognizant engineer or preparer of the environmental submittal:

I certify that I have personally examined and am familiar with the information submitted in the draft RCRA Part A Permit application and all attached documents. To the best of my knowledge, the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment.

<u>D.P. Klenk</u>		<u>10/6/05</u>
Name/Title (type or print)	Signature	Date signed

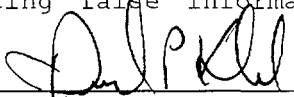
2. To be signed by Manager of the group preparing the environmental submittal:

I certify that this document is, to the best of my knowledge, an accurate, true, and complete description of the draft RCRA Part A Permit application prepared by personnel who have been fully involved in the compilation of this information and in the preparation of this document. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment.

<u>W.M. Wierzbicki</u>		<u>10/6/05</u>
Name/Title (type or print)	Signature	Date signed

3. To be signed by the WVNS personnel supplying material information:

I certify that I have personally examined and am familiar with the information submitted in the draft RCRA Part A Permit application and all attached documents (only for those areas under my direct cognizance). To the best of my knowledge, the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment.

<u>D.P. Klenk</u>		<u>10/6/05</u>
Name/Title (type or print)	Signature	Date signed

Name/Title (type or print)	Signature	Date signed
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Name/Title (type or print)	Signature	Date signed
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Name/Title (type or print)	Signature	Date signed
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Name/Title (type or print)	Signature	Date signed
----------------------------	-----------	-------------

4. To be signed by Manager(s) of group(s) supplying material information:

I certify that this document is, to the best of my knowledge, an accurate, true, and complete description of the draft RCRA Part A Permit application (only for those areas under my direct cognizance). I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment.

C.A. Biedermann

Name/Title (type or print)

Charles A. Biedermann

Signature

9/29/05

Date signed

D.M. Ruszczyk

Name/Title (type or print)

Douglas M. Ruszczyk

Signature

9/29/05

Date signed

Name/Title (type or print)

Signature

Date signed

Name/Title (type or print)

Signature

Date signed

5. To be signed by the Environmental Affairs

I concur with the release of this document and recommend certification by the responsible DOE-OH/WVDP representative or the Manager Environmental, Safety, Health, Quality Assurance and Laboratory Operations.

W.M. Wierzbicki

Name/Title (type or print)

W.M. Wierzbicki

Signature

10/6/05

Date signed

6. To be signed by the WVNS Manager Environmental, Safety, Health, Quality Assurance, and Laboratory Operations (as applicable):

I certify under penalty of law that I have reviewed the environmental submittal, including all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete, to the best of my knowledge. I am aware that there are significant penalties for willfully submitting false information, including the possibility of fine and imprisonment.

J.R. Gerber

Name/Title (type or print)

J.R. Gerber

Signature

10/6/05

Date signed

ATTACHMENT D

PROPOSED LETTER OF TRANSMITTAL TO NYSERDA

Dr. Paul L. Piciulo, Program Director
New York State Energy Research
and Development Authority
10282 Rock Springs Road
West Valley, NY 14171-9799

SUBJECT: Revised Resource Conservation and Recovery Act (RCRA) (1976) Part A
Permit Application (West Valley Demonstration Project [WVDP] EPA
ID#NYD980779540)

Dear Dr. Piciulo:

The Department of Energy (DOE) has enclosed a revised RCRA Part A Permit application for the WVDP pursuant to the New York State Department of Environmental Conservation's (NYSDEC's) letter dated February 3, 2005. Specifically, this permit revision was prepared to include NYSDEC's request for a revision of the RCRA Part A permit application "...to include a storage code under the Integrated Radioactive Waste Treatment System (IRTS)." DOE subsequently transmitted a letter dated April 18, 2005, to NYSDEC outlining the additional revisions that would be incorporated into the revised permit application. The following changes to the RCRA Part A Permit application were identified in DOE's April 18, 2005 letter:

- update New York State Energy Research and Development Authority's (NYSERDA's) corporate address;
- update WVDP environmental permits;
- revise the IRTS, which consists of the Supernatant Treatment System (STS), Liquid Waste Treatment System (LWTS), and Cement Solidification System (CSS), from one to three individual tank treatment units (note: STS is now included with 8D-1 tank treatment unit);
- revise the Vitrification Facility, which consists of the Vitrification Cell, High-Level Waste Interim Storage (HLWIS) Facility, and Analytical & Process Chemistry (A&PC) Hot Cells, from one to three individual container storage units
- revise Attachment B, Section XI, RCRA Unit Summary;
- revise Figures/Drawings presented in Attachments C and D; and
- revise site photographs and/or aerial photographs in Attachment E.

Upon review of the future activities anticipated to be performed at the WVDP, DOE has determined that additional containment building treatment and storage activities would provide for greater flexibility during decontamination and decommissioning (D&D) activities. Therefore, the Vitrification Cell and HLWIS Facility have been identified with containment building storage and treatment codes in this permit application. Using these units as containment buildings would provide for greater flexibility and efficiency in managing high-activity mixed waste generated within the Process Building, as a result of D&D activities.

The specific changes made in this revised RCRA Part A Permit Application include the following:

C. Administrative Changes

- U.S. Environmental Protection Agency (EPA) RCRA Subtitle C Site Identification and Hazardous Waste Permit Information Form (EPA Form 8700-23, Rev. March 2005) was used, as provided by NYSDEC, to prepare this permit application.
- Page 2 of 3, line 9 and page 1 of 6, line 4, respectively, of the RCRA Subtitle C Site Identification Form and Hazardous Waste Permit Information Form. Incorporates the update of NYSERDA's corporate address.
- Page 6 of 6, line 11 of the Hazardous Waste Permit Information Form. The following figure have been incorporated into the permit application to comply with regulatory requirements:
 - a topographic map (Figure A-1) depicting the Western New York Nuclear Service Center, WVDP, injection wells, surface water bodies, and drinking water wells within 0.25 miles of the site;
 - a site map (Figure A-2) of the WVDP depicting the interim status treatment and storage units and surface water bodies; and
 - a site map (Figure A-3) identifying intake and discharge structures, monitoring wells, springs, and surface water bodies.
- Page 6 of 6, line 12, of the Hazardous Waste Permit Information Form. A current facility drawing of the WVDP (11 inch by 17 inch) that replicates Figure A-2 is provided.
- Page 6 of 6, line 13, of the Hazardous Waste Permit Information Form. Photographs showing low aerial or ground level views of the current interim status storage and treatment units are provided.

D. Technical Changes

- Page 3 of 6, line 8 of the Hazardous Waste Permit Information Form has been revised to include the following information:
 - the total container storage (S01) capacity has been increased from 3,975,785 gallons to 4,361,580 gallons to account for inclusion of the Remote-Handled Waste Facility (RHWF) containment building and the increase in the number of units, as described below.

- the total number of container storage units has increased to 17. In the previous permit application, the Vitrification Facility was identified as a container storage unit (S01). The Vitrification Facility consisted of the Vitrification Cell, the HLWIS Facility, and the A&PC Hot Cells, which individually were included in the total capacity presented. In this application, the Vitrification Facility is only identified as other treatment (T04); treatment by vitrification. However, the “subparts” of the Vitrification Facility in this application are identified as individual units; therefore, there is a total increase of two units by this breakout. In addition, by including a container storage process code for the RHWF there is a net increase of three in the number of container storage units in this permit application.
 - the total tank storage (S02) capacity has been increased from 1,530,000 gallons to 1,593,570 gallons to account for the addition of 10 LWTS tanks, which includes the tanks requested by NYSDEC. The increase in tank storage capacity is based on the individual tanks utilized in the LWTS.
 - the total number of tank storage (S02) units has been increased from 4 to 14 to account for the addition of 10 LWTS tanks along with previously identified storage tanks 8D-1, 8D-2, 8D-3, and 8D-4.
 - the total containment building storage (S06) and treatment (T94) capacity has been increased from 1,910 cubic yards (yd³) to 2,380 yd³ to account for the increase in the number of units, as described below.
 - the total number of containment buildings (S06) has increased from one to three with the inclusion of the Vitrification Cell and the HLWIS Facility in this permit application.
 - The total number of units identified with a tank treatment (T01) code has increased from 5 to 6 based on the breakout of IRTS (formerly one treatment unit) into its individual components (i.e., STS, LWTS, and CSS). The STS, based on its physical presence in tank 8D-1 is accounted for by the treatment code previously assigned to this tank. Therefore, there is a net increase of one tank treatment unit.
- Page 3 of 6, line 9 of the Hazardous Waste Permit Information Form has been revised to indicate that the total number of interim status units used for treatment in containers and treatment of debris and stabilization or pretreatment of liquid wastes (T04) has increased from 14 to 16 based on the breakout of the Vitrification Facility (only the A&PC Hot Cells is included) and the IRTS into individual units.
 - Page 5 of 6, line 10 of the Hazardous Waste Permit Information Form has been revised to increase the estimated annual quantity of waste processed through the three containment buildings from 216 tons to 260 tons.

The RCRA Unit Summary (Attachment B) has been revised to describe the activities to be performed for the unit changes as outlined above, and the appropriate process codes associated with each unit.

The following table has been prepared to identify each interim status unit, the corresponding process code(s), and the appropriate section in the RCRA Unit Summary that details the past, present, and future activities for each unit. This table can be used as a cross reference for the information presented on page 3 of 6, line 8 of the Hazardous Waste Permit Information Form.

Contingent upon the timely resolution of any issue/comments and execution of the certification statement by all parties to the application, DOE will transmit the Part A application to NYSDEC in late November 2005 for review and approval. NYSDEC was in agreement with this path forward. Therefore, to meet this commitment DOE is requesting comments from NYSERDA to be provided to DOE by COB November 7, 2005. This should provide sufficient time for comment resolution and a timely submittal to NYSDEC. Your cooperation is greatly appreciated.

Should you have any questions regarding this permit application, please contact Moira Maloney of my staff at (716) 942-4255.

Sincerely,

John H. Swailes, Director
West Valley Demonstration Project

Enclosure: Revision 4 of the RCRA Part A Permit Application for the WVDP

RCRA Part A Permit Application Interim Status Unit Summary

Interim Status Unit Description	S01 Container Storage	S02 Tank Storage	S06 Containment Buildings	T01 Tank Treatment	T94 Treatment in Containment Buildings	T04 Other Treatment			Section Within Attachment B, RCRA Unit Summary
						Pre-Treatment of Liquid Waste	Treatment in Containers	Treatment by Vitrification	
Tanks									Section 1.1 and Section 1.2.
1. 8D-1*		X		X					
2. 8D-2		X		X					
3. 8D-3		X		X					
4. 8D-4		X		X					
Systems									Section 2.0 and Section 3.0.
1. Liquid Waste Treatment System		X		X		X			
2. Cement Solidification System				X			X		
3. Vitrification Treatment System								X	
Container Storage Units									Section 4.0
1. A&PC Hot Cells	X						X		
2. LAG Storage Building	X						X		
3. CPC-WSA	X						X		
4. LAG Storage Addition #1	X						X		
5. LAG Storage Addition #2	X						X		
6. LAG Storage Addition #3	X						X		
7. LAG Storage Addition #4	X						X		
8. Interim Waste Storage Facility	X						X		
9. HWSL #1	X						X		
10. HWSL #2	X						X		
11. HWSL #3	X						X		
12. HWSL #4	X						X		
13. HIC Storage Area	X						X		
14. Contact Size-Reduction Facility	X						X		
Containment Buildings									Section 5.0
1. Remote-Handled Waste Facility	X		X		X				
2. Vitrification Cell	X		X		X				
3. HLWIS Facility	X		X		X				
TOTALS									
Number of Units	17	14**	3	6	3	16		1	

* The STS is primarily located within tank 8D-1, and as ancillary equipment of tank 8D-1, is defined as part of the tank 8D-1 system.

** There are 10 tanks identified as part of the Liquid Waste Treatment System interim status unit for tank storage